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ESSAYS AND CASES.

Art. I.—Cholera Fantasies. By the Editor.

Whether the following speculations are worth reading, it is impossible for any one to know, till he has done it. If familiar with the countless numbers of pathological hypotheses of cholera, which have followed in the train of that epidemic, he will at once perceive that they have as slender claims to originality as he may think they have to sound philosophy. It may be asked, then, why publish them? Not feeling bound to answer this question, we shall pass it by and proceed to state our premises, some of which may be thought as fit to premise any other, as a cholera speculation.

1. When the disease prevailed in Baltimore, it was observed in certain manufactories of sulphuric acid, that the rate of the oxygenation of the sulphur was exceedingly diminished.*

*This fact was communicated to us by Dr. W. Byrd Powell, who stated that he was assured of it by two extensive manufacturers.

2. Oxygen is necessaay to the elimination of carbon from the blood.

3. If the carbon be not excreted from the system, but accumulates in the blood, that fluid, of course suffers deterioration.

4. This deterioration will manifest itself to our senses, by a darker—a more carbonaceous hue.

5. In whatever manner a change in the component parts of the blood is brought about—whether, by the retention of matter which should be eliminated, or by introductions from without, the harmony between that fluid and the vital properties of the interior tunic of the vascular system, is destroyed.

6. When foreign substances even of a mild kind, whether gaseous or liquid, are injected into the veins, and made to mingle with the blood, they produce great prostration of the vital powers, under which the animal sinks immediately without their being eliminated; or vomiting and copious watery purging ensue, when he either recovers or dies.

7. Whenever and wherever the cholera is epidemic and highly malignant, individuals previously in apparent health, occasionally fall prostrate and soon expire, without any great evacuation, and without the symptoms of acute visceral inflammation.

8. More commonly, the first symptom of the disease, is a copious secretion from the alimentary mucous membrane, of a fluid which, when uncombined with the recremental matters existing in the stomach and intestines, resembles the serum of the blood, and has been proved to be that element of the sanguineous mass but little altered by its transudation through the membrane.

9. If this discharge be arrested in its early stages, the patient in general speedily recovers, especially if perspiration be promoted.

10. Should it continue, the patient quickly passes into exhaustion and collapse, though with much greater disturbance of the functions than attends mere hæmorrhage.

11. In the latter stages of fatal cholera, and after death, various parts of the surface of the body assume a blue or sooty complexion.

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12. From the time the effusion has become copious, the heat of the body greatly diminishes, evincing, with other symptoms, the absence of fever.

13. *Post mortem* examinations have revealed but few traces of inflammation.

14. Weak saline tepid injections into the veins, to supply the place of the lost serum, have frequently revived the patient, greatly improved his condition and feelings, and sometimes effected a cure.

Let us now proceed to reason on these, and other facts of a like kind which need not be premised.

We commence with the *assumption*, (resting however on the first fact enumerated, but for which we admit we cannot vouch,) that the condition of the atmosphere when and where cholera prevails, is one which, from a deficiency of oxygen, is unfavorable to the due elimination of carbon from the blood. Let this, for the sake of argument, be admitted, and we proceed to inquire into the consequences.

If the blood be not adequately decarbonated, it of course becomes changed in its constitution; and many facts familiar to the profession, would seem to justify the conclusion, that this change is one which enfeebles the vital powers of the solids; a state which we constantly find present in cholera, even in its early stages. The humoral contamination continuing, the conservative powers of the system are invoked to relieve the internal parieties of the vessels from the offending materials, precisely as those powers are exerted to expel offensive matter from the ærial or alimentary passages. The depuratory outlet of the sanguineous system, as when foreign matters are injected into the veins, or the kidneys cease to secrete, or, sometimes, when dropsical fluids have been absorbed, is the intestinal membrane. In all of these cases, this membrane is excited into increased secretory or permeatory action, by the irritating influence of the peccant matter in the blood, and not by the action of any thing lodged on its surface from without, and under this irritation from within the eliminating discharge is set up. For some time, while this discharge

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is going on, the patient does not feel particularly uncomfortable; and, if not alarmed by moral influences, is apt to think himself but little indisposed; a state of feeling incompatible with the theory of gastro-enteritis, spinitis, encephalitis, or any other original inflammation. At length, however, he begins to feel exhausted in his muscles of locomotion, and the powers of the heart are reduced, precisely as if he had lost a large quantity of blood, so gradually as not to produce syncope. He lies down, and his pulse is weak and empty; the heat of his system is reduced, and all his functions are performed languidly. The secretion of urine, bile, and perspiration is greatly diminished, if not suspended; and all the organic energies of the system seem to be monopolized by the alimentary membrane, which is *diligently occupied* in conveying off the serum of the blood,—for the *purpose* of relieving the vessels from the impress of the irritating carbonaceous element. The work, however, like much of that performed by the *vis medicatrix naturæ*, produces no useful result, for, *as we may presume*, the carbonaceous matter chiefly remains behind, in connection with the fibrin and red globules; which, deprived of a large portion of the serum, and contaminated with the retained carbonaceous matter, constitute a fluid very different from healthy blood; which circulating throughout the vital organs, irritates and enfeebles them still more. Thus by the combined influence of a diminution in the quantity, and a change in the quality of the blood, the stage of collapse is at length produced; and although in this subdued state of the circulation, as in the debility from hæmorrhage, the discharges may cease, still the vital organs, supplied with but little blood, and that little altered in its qualities, may not be able to recover from their exhaustion, and at length cease to perform their functions. This condition of the circulation may fairly be considered as utterly unfavorable to the development of animal heat, which is well known to be in most cases very small.

The same state of the blood—a languid movement, thick consistence and carbonaceous distemperature—explains the

stagnations in different parts of the capillary tissue, and the blue or purple hue which they exhibit before, and which is often much increased after death.

Finally, as to the cramps and spasms of the muscles of the limbs and sometimes of the heart, they may arise in part from the depletion, in part from the brain and the spinal marrow and the heart; being irritated by the dark and peccant fluid which circulates through or stagnates in their substance; and in part from the impress of the infiltrating serum upon the surface of the membrane through which it has passed. We are aware, that it has been often denied that secreting surfaces are ever irritated by the fluids which the tissues beneath throw upon them. But where is the proof of this fact? Who has not met with ulcers, in which the accumulation of a vitiated purulent, or a sanious fluid, under the dressings, gave great uneasiness? Do we not constantly meet with cases of ordinary cholera morbus, where the vomiting and diarrhœa appear to be the effect of the reaction of the bile upon the mucous membrane, although that membrane is its natural recipient? When the eye is inflamed, and tears accumulate beneath the lids, they greatly increase the anguish of the patient, who always expresses his gratification at their escape. In common diarrhœa and cholera, the patient generally feels much more comfortable after a discharge, and the same remark is true of epidemic cholera. Now do not these facts indicate, that secreting surfaces may be irritated by their own vitiated secretions? We believe they do, and shall continue to think so, till stronger proofs to the contrary, than we have yet seen shall present themselves.

These views of the pathology of cholera, if the first proposition,—an altered and carbonaceous state of the blood were established—would, it appears to us, explain more of the phenomena of the disease than those theories which recognize a primary irritation of the gastro-enteric mucous membrane, by an agent applied to it from without; but if called on to assign the mode in which the supposed state of the atmosphere is produced, reproduced, and extended, we can no more do it,

than we can explain the origin and propagation of any other of the numerous atmospheric agents, to which the epidemic has been confidently ascribed. In the absence of all positive and accurate knowledge in this branch of ætiology, we must be content to observe the symptoms and morbid appearances; and by their aid endeavor to determine the *modus agendi* of the unknown cause. This, we have assumed, is through the lungs or the blood, and in a negative manner. From a certain morbid condition of that fluid, results the diarrhœa, which contributes, by drawing off the serum, still further to unfit the blood from performing its functions, while all the sinister effects are augmented by a reduction in the quantity. Under these views the suspension of the other secretions than the intestinal, is secondary and consequential; and the ultimate failure of all the functions, is the effect of the organs being inadequately supplied with blood, and of what they receive being changed in its qualities.

Of course, we anticipate that all this will be denounced as humoralism. But should it be denounced because it is humoralism? We think not. On the animal kingdom might be inscribed the motto, *omnis e liquore*. All the solids are built up and out of the fluids; into and out of which various matters must continually pass. To say that they never become contaminated, without a previous disease of the solids, is, we humbly conceive, quite gratuitous. It is undeniable that disease in the solids affects the fluids, and where is the warrant for declaring these morbid influences not reciprocal? We are for no *exclusive* system of solidism or humoralism. Man is a compound of liquids and solids, both are necessary in his physiological condition, and both must participate in his pathological state. If the fluids undergo a change they irritate the containing solids, raising or depressing and perverting their actions and powers, and generally occasioning some great excretion, as a means of depuration. Thus in the decline of fevers, we have *critical* perspirations and diarrhœas to carry off the sanguinous impurities, and in cholera profuse serous discharges for a similar purpose, with this difference, that in the

former case the peccant matter is the effect of the fever, in the latter the remote cause itself, or something absorbed or retained in the blood, is the agent, without any intervening morbid action of the solids.

Let us, by a reference to several remedies, see how far these speculations can guide us in practice.

1. Bloodletting. Should the condition of the blood, which we have *assumed* to exist, occur in a person of sanguine temperament, and not lead to profuse diarrhœa it may awaken more or less inflammatory action or a general phlogistic diathesis, in which case venesection is beneficial, by diminishing the general mass of contaminated blood, and by predisposing to increased healthy secretion from the glandular apparatus generally, whereby the offensive element is eliminated. But should the serous effusion have been copious, bloodletting is not required, for, (as we assume,) there is no inflammation to subdue, and it is even prejudicial, because it increases the vascular inanition; and who that has practised in the epidemic can venture to affirm, that in this condition he has found any beneficial results from venesection? Still less we believe has it been serviceable in the stages of collapse, if that condition has been preceded by copious secretion, instead of resulting from the immediate impress on the heart and brain and other vital organs of the altered blood.

2. Emetics. When these have done good, it was generally in the early periods of the disease, and they seem to have acted by putting aside the secretory operation going on in the membrane below, and by determining upon the surface of the body—in other words, by arresting that discharge which must be stopped or the patient dies. On a similar principle they restrain hæmorrhages. It is worthy of remark, that those which are combined with stimulants are most efficacious, which is what might be expected on the hypothesis we are advocating, but not on that of gastro-enteritis. In *advanced* stages of the disease, we have not seen them of any substantial benefit, except when composed of the most stimulating ingredients, such, indeed, as are inadmissible in gastro-enteritis.

3. Cathartics. These are only useful in the early stages, when, as in other cases of incipient diarrhœa, they substitute an action of their own, for the morbid action previously existing, and thus arrest the inordinate secretion.

4. Mercurials. These have been given to excite the function of the liver. It has been assumed that a failure or suspension of this function was the cause of the diarrhœa, but our hypothesis makes it the *effect*. Still there is *reason* in the mercurial practice. Calomel may be capable, to some extent, of setting aside the secretory action of the mucous membrane, and thus arresting the discharge; and by increasing or restoring the secretion of bile, it may arrest that of serum, for among a group of organs which are overthrown in their functions, if we succeed in rectifying one, the others from association are often righted up.

5. Saline Draughts and Venous Injections. The former might do good if they were absorbed; but there is no evidence that during an attack of cholera, much absorption takes place; and when they are thrown into the veins, they have too little resemblance to the lost serum to supply its place, and act too much in bulk upon the solids before they can be mixed with the blood.

6. Internal Stimulants. These may do good during the stage of secretion, by superseding the morbid secretory action, and afterwards by supporting the powers of the system. But while their efficacy has not been great it has been too much to be reconciled with the theory of gastro-enteritis.

7. External Stimulants. These have done good, by inviting the blood from the centre to the circumference of the system—thus restraining the discharge—and by contributing to correct its enervating influence.

8. Ice. The beneficial effects of ice in cholera are probably of the same kind as in some forms of hæmorrhage; and limited to a restraining of the discharge, to which, however, it is often inadequate.

9. Narcotics. If a mere nervous irritation, independent of a morbid condition of the blood, was the essential circum-

stance in cholera, narcotics ought to do far more good than they have yet done; and if inflammation existed they should have done much greater mischief. Their effects seem to us to be auxiliary and palliative—generally acceptable to the patient, and as in hæmorrhage restraining to the discharge.

10. Astringents. On the hypothesis to which we are devoting an idle hour, astringents might be considered as useful. When thrown into the lower bowels they sometimes perhaps restrain the external evacuation. When taken into the stomach they are too often like our other remedies, immediately ejected. If made to pass the pylorus in large quantities, they might be expected to do good, provided they were capable of restraining the exudation of serum through the membrane. In a late number of the Journal we were enabled to give an encouraging account of one of this class of medicines—the acetate of lead. It seemed to act by arresting the secretion, which is the first and great object to be accomplished. It is not, therefore, adapted to the advanced stages of the disease. To be effective it should be given in ten grain doses with opium, and repeated every one, two, or three hours, according to the profuseness of the discharge.

11. Oxygen Gas. On the hypothesis of accumulated carbon in the blood, the application of this gas ought to do good. At this moment we do not recollect the results which have been obtained by those who have given it a trial. It might be used first by inhalation; second, by immersion of the body of the patient in an atmosphere of the same gas; third, by giving him draughts and enemata of cold water, in which the gas has been condensed by a forcing pump. All of these modes might be practiced in cities and hospitals, but would be impossible in the country.

The foregoing pages contain the substance of some extempore remarks in the *Cincinnati Medical Society.* They have been written down, merely to see how far a humoral theory,

which we do not claim as our own, can be made to explain the phenomena of cholera. Since they were prepared for the press, we have met with a paper by Prof. Horner in the May No. of the American Journal, on the morbid anatomy of this disease, some account of which, by Prof. Gross, will be found under our head of Reviews, in this number.

The morbid appearances which Dr. H. has described, differ in some respects from those detailed by other observers, but, as far as they relate to the alimentary canal, seem to us to be utterly insufficient, to explain the early mortality of this disease; and, negatively, go to confirm us in the opinion, that we must look elsewhere, than to the digestive tube, for those lesions which occasion death. But in what organ do they exist? Certainly not in the nervous centres, the heart, or the lungs. We are driven then, it would appear, to the blood; as in the reduced and altered condition of that fluid, and there only, do we find an adequate cause, for the death of the patient. When the entire mass is greatly reduced in quantity, inspissated, and black, both in the arteries and veins, in the left as well as the right cavities of the heart, why should we hesitate to ascribe the fate of the patient to hæmatic alterations? Is not a certain amount of decarbonated blood indispensable to the support of the phenomena of life? and if we find it wanting should we not expect those phenomena to cease? Should future researches reveal to us organic changes in the solids, of a kind not hitherto brought to light, the fact of a fatal lesion of the blood would still continue, and to it these very changes might perhaps be ascribed. Thus to the hæmatic vitiation and serous exfiltration, we might attribute all the morbid appearances found in the mucous membrane of the alimentary canal, much more rationally, it appears to us, than to reverse the proposition, and derive the former from the latter.

In 1832 we had occasion several times to quote from Mr. Greenhow, of New Castle, Eng., one of the most judicious writers on cholera which that country has produced. A recent number, (April, 1835,) of the Edinburg Medical and Surgical Journal contains a paper from that gentleman, giving his latest experience in the treatment of the disease; and although he is a believer in the doctrine of a primary impression on the mucous membrane of the alimentary canal, he evidently inclines to the opinion, that life is destroyed by the influence on the blood, of the excessive exfiltration through that membrane, and prescribes accordingly. To restrain the discharge, he proposes a medicine, which we have not used, and which, *a priori*, we should think inferior to the acetate of lead. We shall, however, conclude this article with such an extract from his paper, as will make known his views, and enable such of our readers as think well of his remedy, to employ it in his own way. The extract relates to that *stadium* of the disease, which is characterized by serous discharges.

"In the stage of rice-water dejections, which, properly speaking, is the first stage in which we can with certainty pronounce the disease cholera, I have tried nearly all the plans which have at various times been brought forward as successful, and I cannot say that I was satisfied with the result of any one remedy. A small proportion of my patients recovered, it is true; but it always remained a matter of doubt upon my mind, how far the means employed were conducive to that end; and I naturally considered what remedy was most likely to exert a control over a discharge which was evidently draining the system of the fluid necessary to carry on the functions of life; and, considering the case as one of passive hæmorrhage, I at once decided upon trying the sulphuric acid, from its well known powers of coagulating albumen, as well as acting as an astringent in closing the relaxed mouths of the exhalent. The first case in which I tried it, after the first dose the stools changed their character, being a mass of coagulated albumen; after the third dose the purging ceased, and at the end of fourteen hours the patient passed a feculent motion mixed with albuminous flakes, and the patient recovered without experiencing any check. I have not detailed the case more fully, as it appeared at the time in the London Medical Gazette. Since then I have only had an opportunity of trying it in two cases, in both of which it arrested the rice-water dejections in a precisely similar manner, leaving no doubt as to the effect being produced by the acid. One of the last mentioned patients had a second attack of rice-water purging when in a state of convalescence, from committing an error in diet. He was in fact a confirmed sot. The complaint was a second time arrested by the acid, but the man died a

month afterwards, his digestive organs being destroyed by his long-continued habits of intemperance. The form in which I have hitherto exhibited the acid is the following:

℞. *Infus. Caryoph,* ℥vi.; *Acid. Sulph. dil.* ℥ii.; *Tinc. Opii.* gtt. xxx.; *Sacc. Pur.* ℥ss. *M. Cap.* ℥i. 6m. *hor.* and at longer intervals when the purging is restrained."

The delay of our publishers, enables us to announce the resuscitation of the epidemic in the Valley of the Mississippi, constituting its fourth annual invasion. As early as the month of May, perhaps earlier, it appeared in various parts of the states of Mississippi and Tennessee, and in the succeeding month was revived in Missouri, Illinois, Indiana, Kentucky, and Ohio. Wide however as has been its geographical range, the mortality has not been great, compared with that of previous years, and but few places have been visited. Several towns, as Memphis, Tennessee; Madison, Indiana; and certain circumscribed spots, in the country, have experienced malignant and fatal visitations, while the surrounding inhabitants entirely escaped, or but a single violent case now and then occurred. Cincinnati has suffered in so slight a degree, as not to experience the least disturbance of social and commercial relations. Indeed it has been sporadic only; and not a few of the cases have been in persons who came from the country. At present, July 20, the city and surrounding country, as far as we know, are quite free from all epidemic distemperature. In fact the spring and summer so far, have been among our healthiest; and, we may add, our coolest and rainiest. For many years, we do not recollect a period of six or eight weeks before and after the summer solstice, in which a greater number of copious showers occurred, or in which the heat was more temperate.

II.—Manual Strangulation.

Observations on Manual Strangulation, illustrated by Cases and Experiments. By S. D. Gross, M. D., Professor of General and Pathological Anatomy, Physiology, and Medical Jurisprudence in Cincinnati College.

The subject of manual strangulation, although one of deep interest in a medico-legal point of view, has not hitherto received that attention from the profession which its great importance demands. Indeed, in many of our systematic works on medical jurisprudence, it is either but very imperfectly discussed, or totally neglected, most authors evidently considering it as a topic of comparatively little consequence. The reason of this is not very obvious, unless we seek for it in the fact that no writer, either ancient or modern, has deemed the subject of sufficient dignity and importance to make it the object of special investigation, and thereby raise it to that rank which it ought to hold in every treatise on forensic medicine.

Manual strangulation may be defined to be a species of murder, in which, as its name implies, death is produced, either directly or indirectly, by the pressure of the hand, applied upon the larynx or trachea, so as to interrupt the respiratory process. It is probably a more frequent but less violent mode of homicide than hanging, and hence the symptoms are often extremely obscure, or so blended with those characterizing strangulation by other causes, that it is by no means easy always to discriminate between them.

In every species of strangling, whether it be the result of hanging or of manual effort, the general appearances exhibited on dissection are very nearly alike, the only differences consisting in the external lesions which we may expect to meet at the part of the body on which the violence has been inflicted. In most cases there is a distortion of the countenance, attended with lividity, and more or less swelling; the eyes are suffused with blood, and propelled, as it were, from their sockets; the lids are half open, and of a bluish color; the

tongue is tumid, livid, and protruded; the lips are of a dark purple hue; and the mouth and nose contain more or less sanguinolent froth. In hanging, the cartilages of the larynx are also sometimes fractured; and the vertebræ of the neck not unfrequently dislocated. Luxation is particularly apt to take place in heavy persons, or in those who fall from a height upon the end of the rope, or where attempts are made to hasten death by augmenting the weight of the body. These accidents, it is obvious, will not be so likely to occur in manual strangulation, since the amount of pressure necessary to occlude the windpipe, need neither be so great nor so violent, in order to induce death, as under the circumstances just mentioned. The likelihood of an occurrence of this kind will be still less probable if, at the time of the murder, the neck be resting upon a level surface, in which case it would be almost impossible, however great the force applied to the throat, to break or luxate any of the cervical vertabræ.

In both sorts of death the violence is ordinarily so great as to give rise to the expulsion of the urine, fœces, and semen. In persons that have been hung, the neck presents a livid, discolored aspect, and the impression of the cord is generally very distinct, extending horizontally round the cervical region. In persons, on the contrary, that have been strangled by the hand, we usually find marks of violence in front of the throat, caused by the fingers or some other body. In either case the appearances here alluded to are in general sufficiently characteristic to enable us to distinguish, without difficulty, the sort of death by which the individual has been destroyed. In addition to these symptoms there may be wounds or abrasions on different parts of the body; and, in most instances, the fingers are bent, and the hand nearly closed.

On examining the interior parts of the body, it will generally be found that they are inordinately loaded with blood, especially the lungs and the heart; the large vessels of the neck are likewise greatly distended; the mucous membrane of the mouth, fauces, and respiratory organs, is deeply injected; and the air passages usually contain more or less bloody

froth. These signs, however, as well as some of those observable on the exterior of the body, are extremely variable, and as it is of importance to know what amount of confidence should be placed upon each, I shall again advert to them in a subsequent part of this paper.

In regard to the immediate causes of this species of death, writers are by no means agreed. One of the most generally received opinions is, that which supposes it to be effected by a kind of apoplexy, produced by pressure on the large veins of the neck. The blood being thus prevented from returning to the heart, must necessarily give rise to a certain degree of cerebral compression, followed speedily by drowsiness, and deep coma. Owing to this fact, persons who are hung or strangled seldom suffer much pain, and if the compression of the windpipe and the vessels of the neck be not too long continued, or blood extravasated into the brain, recovery in such cases would neither be impossible nor probably of unfrequent occurrence. The celebrated Morgagni mentions the case of a person that survived hanging, who remembered nothing of what transpired, excepting a few flashes of light that passed before his eyes at the moment he was swung off from the cart: he experienced no pain, and soon sunk into a most profound sleep. Similar instances are narrated by Wepfer, Fodere, and other writers.

A second, and by far more rational opinion is that which attributes the cause of death to the occlusion of the windpipe, by which the air is prevented from reaching the lungs. In consequence of this the blood is deprived of the influence of the atmosphere, and being thus rendered incapable of stimulating the brain and heart, these organs speedily cease to execute their functions.

Pressure on the pneumo-gastric and sympathetic nerves, has also been supposed by some to be a prominent effect in producing death in strangulation, by interrupting the nervous influence; but as these structures cannot be compressed without at the same time arresting the circulation in the large vessels of the neck, it is evident that it cannot be entitled to the importance that has been attributed to it.

A fourth cause, and the last to which I shall here allude, is a luxation or fracture of one or more of the upper cervical vertebræ, arresting respiration by destroying the functions of the phrenic nerves. This accident, however, as already stated, is not likely to take place in manual strangulation, though in hanging it is of frequent occurrence, and of course always fatal.

Having thus presented a rapid sketch of the general signs of the several species of strangulation, with a few of the more plausible opinions, as to the proximate causes of this kind of death, I shall proceed, in the next place, to relate the case of Mrs. Getter, who was killed by manual strangulation, in 1833.

Mrs. Getter was murdered on the night of the 27th of February, in an open field, about two miles from Easton, Pennsylvania, her husband being the perpetrator of the deed. Her body was found the next morning, with the head lying in a somewhat dependent position; and the dissection was made on the same day, about two o'clock in the afternoon, at a house in the neighborhood, whither she had been removed. She was a woman of middle stature, with a short, thick neck, and a broad, expanded chest, her whole appearance being remarkably strong and robust. At the time of my examination, the body was stiff but not frozen, although the weather had been quite cold the previous night. The countenance exhibited a full, bloated aspect; the lips were tumid, and of a dark bluish tint; the tongue was slightly livid, but did not project between the teeth; the mouth was filled with froth, and the vessels of its lining membrane greatly distended; the jaws were nearly closed; and the nostrils plugged up with solid ice, caused no doubt by the congelation of the frothy discharges that took place soon after death; the eyes were extremely prominent, and the lids half open, and turgid, their connecting membrane — the conjunctiva — being unusually vascular. The ears and temples, especially the left, were of a dark color, the subcutaneous veins of those parts being evidently engorged with blood. The hair was dishevelled, and several of the teeth of the comb, which was broken, were en-

tangled in it. The throat exhibited marks of violence, on the right side was an indentation, deeper in the middle than at the extremities, which had the appearance as if it had been made by a thumb or finger nail; it extended into the true skin, and was about half an inch long, by the twelfth of an inch in width. An abrasion also existed at the upper part of the larynx, passing from near the middle line of the neck over towards the left side, its breadth being about an inch and a half, and its vertical extent about one inch. On removing her clothes, I likewise discovered an abrasion on the left shoulder, but it was so slight as not to indicate any serious injury. Such were the appearances, and such the marks that were found on the exterior of the body; I shall now proceed to describe those that presented themselves on dissection.

On laying open the neck the veins bled profusely at every incision, rendering it necessary for me to make frequent use of the sponge; the jugulars, indeed, both external and internal, were distended to their very utmost. The carotid arteries of both sides were empty. Beneath the muscles on the left side of the neck, towards the upper part of the larynx, was a slight extravasation of blood, corresponding to the external marks already alluded to, as situated at that portion of the cervical region. The windpipe was filled with frothy matter, and its lining membrane throughout deeply injected: there was no fracture of the cartilages of the larynx, nor any appearance of injury in those of the trachea.

The diaphragm was arched; and the lungs were throughout of a deep black, their vessels bleeding freely on being cut into: the blood which flowed from them was of a dark venous color, mixed with froth. They covered the sides of the heart, and were, in every other respect, perfectly natural.

The cavities of the heart, both right and left, were filled with dark blood, the auricles being almost black. The coronary vessels were greatly injected, and altogether the organ presented the appearance of a beautiful vascular preparation. A small quantity of watery fluid was contained in the pericardium, the vessels of which were likewise somewhat engorged.

The abdominal viscera were, in every respect, natural, as well as healthy, none of them presenting the slightest structural derangement. The uterus, the vessels of which were elegantly injected, contained a fœtus of about seven months. The bladder was empty, and contracted.

It will be perceived from the details of the above case, that the brain of the deceased was not examined; this omission I had afterwards reason much to regret, not indeed on account of any doubt raised in my own mind concerning the true cause of her death, but on account of the fact that we should never neglect, in investigations of this kind, the most trivial circumstances that may be calculated to throw light on the subject, or prevent the counsel of the prisoner from taking undue advantage of what, to him, might appear great ignorance on the part of the medical witness. Anxious to compensate, in some degree, for this omission, I was induced, shortly after having examined the body of Mrs. Getter, to institute a series of experiments, a few only of which it will be necessary here to relate.

Experiment 1.—Strangled a small dog, by applying the hands firmly over the superior part of the larynx. A few moments after the pressure was commenced, the animal discharged his urine and fœces; the tongue assumed a dark bluish color, but did not protrude through the mouth; the eyes became dilated; and in ten minutes the dog was completely dead, the pulsation having ceased both in the arteries and in the heart.

Dissection six hours after death.—Body stiff—pupils widely dilated—tongue of a dark livid color—small quantity of froth in the fauces, but none at the nose or mouth. *Neck.*—Veins greatly distended, being literally filled with black fluid blood—both carotids empty—mucous membrane of the larynx, trachea, and bronchial tubes almost white, there being here and there merely a little capillary injection—no froth in these passages; and no effusion of blood or perceptible injury at the parts on which the pressure was applied in strangling the animal. *Lungs*—collapsed, cepitating, and containing

very little blood, excepting the lower portion of the left lobe, which bled freely on being incised. *Heart*—right and left auricles completely distended, as also the right ventricle, the left being nearly empty—coronary vessels beautifully injected, as also those of the pericardium. The diaphragm was greatly arched. *Abdominal Viscera*—mucous membrane of the stomach and intestines unusually vascular—spleen natural—liver of a deep red, and bleeding freely on being cut into—kidneys of a deep bluish color—bladder empty and contracted, its appearance being nearly natural—ascending and descending cavæ filled with black fluid blood—aorta nearly empty, and collapsed—mesenterie veins distended. *Brain*—vessels of the dura matter slightly injected—cerebral substance somewhat darker than usual—no blood effused into the ventricles, and none lost in opening the skull—spinal marrow perfectly natural.

Experiment 2.—In this experiment, which was likewise performed on a dog, the strangulation was effected in about nine minutes; and the evacuation of the urine and fœces followed immediately after the application of the hand. The examination was made twenty-four hours after death. *Neck*—veins highly distended—carotids empty, containing only a few drops of dark blood—mucous membrane of the fauces, larynx, trachea, and bronchia, deeply injected—tongue of a livid hue, and projecting slightly between the teeth—no froth either in the mouth or air passages. *Lungs*—collapsed, crepitous, and engorged with dark blood, the pulmonary veins being filled. *Heart*—Pericardium injected, and containing a large quanty of sanguinolent fluid—auricles filled with black blood, the venticles being nearly empty—coronary vessels distended—diaphragm arched, and highly vascular. *Abdominal Viscera*—engorged with blood, and the gastro-intestinal mucous membrane of a dark reddish tint—bladder empty, and contracted—ascending cava distended—aorta empty. *Brain*—dura and pia mater injected, the latter highly so—cerebral substance somewhat darker than naturally—a slight extravasation of blood at the base of the brain, accompanied

by an engorgement of the vessels of that part. *Spinal marrow*—of a darkish color, and its membranes considerably injected.

Experiment 3.—Strangled a full grown rabbit by hanging with a cord, and allowed him to remain suspended about three quarters of an hour, although he expired in less than five minutes. *Head*—pericranium unnaturally vascular—dura mater perfectly transparent, and presenting not the slightest engorgement—pia mater partially injected—cerebral vessels natural—no effusion of blood into the brain or cranial cavity—eyes prominent—conjunctiva natural. *Mouth and Neck*—no froth in the mouth, or air passages, but the mucous membranes of these parts highly vascular—jugular veins filled with dark blood—carotid arteries empty. *Chest*—lungs collapsed, crepitous and slightly engorged, their color being a light red—cavities and vessels of the heart completely filled with blood—no serosity in pericardium. *Abdomen*—diaphragm arched—aorta empty—vena cava distended—liver of a deep red, and bleeding on being incised—spleen not engorged—mucous membrane of stomach and small intestines deeply injected, presenting a reddish aspect, approaching to vermilion—large intestines natural in their appearance—kidneys injected—bladder empty and contracted, its inner coating being of a light greyish tint.

Experiment 4.—In this experiment, in which the animal was strangled with the hand, the eyes were unusually prominent, and the tongue, which was of its natural color, projected between the teeth, there being no froth either at the mouth or nose—tbe large veins of the neck were distended, but the carotids were empty—the larynx was filled with frothy matter, and its lining membrane, throughout, was perfectly white. *Lungs*—these organs were but slightly congested, and when cut into gave vent to a frothy sanguinolent discharge: they did not cover the sides of the heart—the pulmonary arteries and veins were completely filled, as far as their point of entrance into the lungs—the four sides of the *heart* were occupied with black grumous blood, and the coronary vessels, as

well as those of the pericardium, beautifully injected. *Abdominal Viscera* — the diaphragm was pushed towards the chest; and the abdominal organs, without exception, were perfectly natural in their appearance — the vena cava and mesenteric veins were distended; the gastro-intestinal mucous membrane was of its natural color; and the bladder empty, and contracted. *Brain* — this organ was of a much darker color than usual; the vessels of the pia mater were injected, but those of the dura mater perfectly empty. There was no water in the ventricles, nor any extravasation of blood — the spinal marrow had a healthy aspect, but the vessels of the pia mater were slightly injected.

The results of these and similar experiments, amounting in all to twelve in number, are almost precisely of the same import; yet, notwithstanding this, they unfortunately serve to show that they cannot be relied upon exclusively as proof of manual strangulation; and unless there be, at the same time, marks of violence of some kind or other upon the throat, the medical examiner would not be justifiable, I conceive, under any circumstances, to conclude that a murder of this sort had been committed; inasmuch as the general and more prominent signs of the different species of strangling are precisely alike. It does not appear to me, however, to be necessary that we should be able to make out the positive marks of fingers; on the contrary, it will be sufficient that there should be bruises or abrasions about the larynx or trachea. In the case of Mrs. Getter, it will be recollected, there was an indentation on the right side of the windpipe, resembling that made by a thumb or finger nail, and also an abrasion of the scarf-skin extending towards the left side of that organ; and it was only by taking these signs in connection with the bloated and suffused condition of the countenance, and the appearances revealed on dissection, that I felt myself authorized, on the trial, to give it as my decided conviction that the deceased had come to her end by manual strangulation; an opinion amply justified by the subsequent confession of the prisoner.

In none of my experiments was there any extravasated

blood in the ventricles of the brain, or any extraordinary congestion of its vessels. In some, indeed, the cerebral substance was perfectly natural, as were also its enveloping membranes, the dura and pia mater. Hence, no reliance whatever, I conceive, should be placed upon any appearances that this organ may present in the case before us. Congestion of the brain, or extravasation of blood into its cavities, would much depend, in manual strangulation, on the manner in which the hand is applied upon the throat. If, for instance, the pressure is confined exclusively to the windpipe, it will be impossible for the brain to become engorged, because the blood in the jugular veins, being uninterrupted in its passage, will of course be able readily to find its way back to the heart; but if the return of this fluid is prevented by firmly constricting the vessels here referred to, apoplexy must, as a matter of course, be the result. In death from hanging this is probably almost always the case, from the manner in which the rope is fixed round the neck, whereas it would not necessarily follow in manual strangulation. In dissecting the body of John Harding, a soldier who committed suicide by hanging himself with a silk handkerchief, in March, 1833, I found the vessels of the dura and pia mater completely engorged, the cerebral substance of a very dark vascular aspect, and a large quantity of blood, amounting to no less than seven or eight ounces, extravasated into the ventricles, and on the base of the brain. He was a short, robust person, and the handkerchief was drawn so tightly round the neck as to prevent, very effectually, the return of the blood from the brain to the heart.

With respect to the distended state of the vessels of the neck, the engorgement of the lungs, and the loaded condition of the heart, they cannot be regarded as pathognomonic signs in the case before us, inasmuch as the same appearances are observed in death from hanging. I repeat it, therefore, that unless there are marks of violence about the throat, these symptoms should not be considered, under any circumstances, as positive indications of manual strangulation.

In a dissection made by Littre, a French physician, of a

woman that had been strangled by the hand, there was a discharge of about an ounce of blood from the left ear, accompanied by a laceration of the tympanum; the vessels of the brain were unusually turgid; blood was extravasated into the ventricles, and also on the base of the cranium; the lungs were engorged, and their lining membrane unnaturally vascular. The cavities of the heart, however, were nearly empty, scarcely an ounce of blood being contained in the right ventricle, and this was *frothy*, like that of the lungs.* No mention is made, by the reporter of this case, as to whether there were any external lesions or not about the throat.

The marks of violence on the throat are sometimes very slight, yet, taken in connection with the appearances already referred to, they ought not to be considered as the less valuable in making up our opinion as to the probable cause of death. Metzger mentions the case of a young officer who was strangled in his bed by a soldier; yet the examining surgeon could find only one small spot on his windpipe, which the murderer afterwards confessed he had produced by violent pressure with his thumb.

Great discrepancy also not unfrequently occurs on the part of the witnesses, in relation to the number and extent of the marks about the throat, which the court and jury often find it extremely difficult to reconcile. Thus, in a man of the name of Beddingfield, who was murdered in England, in 1763, by manual strangulation, one of the surgeons testified that he saw the marks of a thumb and three fingers; the other, a thumb and four fingers; while a third witness, who also inspected the marks at the inquest, spoke of two only, "which looked as if the blood was set in the skin."† So also in the case of Mrs. Getter, one of the jury of inquest testified that the abrasion on the neck of the deceased was about the breadth of four fingers, another that it was three inches, and a third that it was only two inches. Little reliance should be placed upon such testimony; and as it is always the duty of the ex-

*Smith's Forensic Medicine, p. 244.

†Beck's Medical Jurisprudence, vol. ii. p. 49.

amining surgeon to note down every lesion about the body, however slight, no serious mistake will be likely to result even where the accounts are so extremely contradictory as they were in the cases to which I have just referred.

The time necessary to destroy life in manual strangulation does not, in all probability, exceed five or six minutes. In several of my experiments, I removed the hand from the throat at the end of three and a half and four minutes, and in every instance the animal speedily recovered, his first movements, however, being greatly confused, and like those of a person waking from a profound sleep. The safety of the animals in these cases was no doubt owing, at least in a great measure, to the facility with which the blood was enabled to return to the heart, thus preventing the brain from becoming apoplectic by an effusion of sanguinous fluid, or by over distention of its vessels. The ease with which a person may be killed in manual strangulation is strikingly exemplified in the death of Dr. Clench, which took place in London, in 1692. He was strangled in a hackney-coach by two men, whilst driving about the streets of the city, without any knowledge of the transaction on the part of the coachman, who afterwards found him kneeling down, with his head on the seat, quite dead, and a handkerchief bound round his neck, in which was a piece of coal, placed directly over the windpipe.* Getter was also but a short time in effecting the murder of his wife; for in the confession which he made on the day previous to his execution, he acknowledged that he was only a few minutes in accomplishing his diabolical purpose.

In concluding this paper, which has already been extended to an unusual length, it will not be amiss, perhaps, briefly to refer to some of those diseases, which, by suddenly inducing death, may give rise to appearances very similar to those characterizing manual strangulation. The most important of these are, apoplexy, hysteria, epilepsy, and intoxication.

In persons carried off by apoplexy the countenance is generally livid and suffused; the eyes red, and prominent; and

*Smith, op. cit. p. 239.

the internal organs, especially the brain, heart, and lungs, are engorged with black blood. These symptoms, considered in the abstract, might be very easily mistaken for those of manual strangulation; and the grounds for such an opinion would be still more plausible if the individual had died under circumstances calculated to excite suspicion. A man, for instance, may be suddenly overtaken with an apoplectic convulsion, in a place where there are hard or sharp objects, as various articles of furniture, if he be in a room, or stones or other bodies, if he be out of doors; and by falling upon these, he may not only receive considerable abrasions on the throat but even extensive bruises and wounds. In such cases the medical examiner would, of course, be extremely liable to err, and the only possible chance of arriving at any satisfactory conclusion, as to the probable cause of death, would be to enquire carefully into the habits of the deceased, his previous state of health, his predisposition to the disease in question, the spot where he has been found, and all the circumstances by which he was surrounded when discovered.

Hysteria usually comes on suddenly, and when the attack is violent, or the woman is predisposed to apoplexy, death may very easily overtake her out of doors or in some solitary place. The suffocating sensation which females generally experience in this disease, often induces them, as it were unconsciously, to grasp the throat, and hence, in attempts of this kind, it is not unreasonable to suppose that the marks of finger nails will sometimes be imprinted upon the skin of that region. The eyes of such as die in this manner are ordinarily prominent, and suffused; the face is livid, and swollen; the tongue protruded, or the jaws firmly locked; the fists are clenched; and the whole body is more or less contorted. The apoplectic form of this complaint—which is that here referred to—is commonly met with in robust, plethoric women, with short, thick necks, and strong and easily excited passions. These facts are of importance in a medico-legal point of view, and as such they ought never to be overlooked in our investigations.

With regard to death from epilepsy and intoxication, the symptoms would probably not be so strongly marked as in apoplexy and hysteria; yet as there is a *possibility* that they might simulate the appearances resulting from manual strangulation, it is but proper that the medical jurist should be on his guard, lest by a too hasty conclusion he may be instrumental in sacrificing the life of an innocent individual.

Cincinnati, May, 1835.

III.—Siamese Connection Successfully Dissevered.

A case of twins united at the umbilicus, in which the connection was cut and the perfect child survived. By Delos White, M. D., Professor of Anatomy in the Western Medical College of New York. Communicated by George W. Little, M. D.

To the Editor of the Western Medical and Surgical Journal:

Sir—Believing that the particulars of the following unpublished case may possess some interest for your readers, I take the liberty of sending you a sketch of it. It goes, I think, fully to establish one important fact, which, as far as I know, has been considered somewhat questionable by operators—viz: the capability of very young infants to sustain formidable operations. It is believed, also, that the case will be found interesting in other points of view.

Mrs. W———, of Otsego county, N. York, the mother of several healthy well formed children, was taken in labor in the month of November, 1833. The presentation was natural, and the labor proceeded without any unusual difficulty, until the head and shoulders were expelled. There was then delay in the further delivering, owing to some cause which the attending physician could not readily understand. After a few severe pains, however, the labor was completed, and the cause of the delay became sufficiently obvious. The child presented to the astonished eyes of the accoucheur the appearance of being *double below the sternum.*

The parents were naturally exceedingly distressed at the deformity, and very anxious that if possible something should be done to remove it. The father, soon after the birth of the child, called upon Dr. Delos White, of Cherry Valley, with whom I was then a partner in business, stating as nearly as he could the particulars of the case, and requested the Dr. to examine it and give his opinion whether the redundant parts could be removed without imminently endangering the life of the child. In compliance with that request we made a particular examination of the case.

We found attached to the scrobiculis cordis a perfectly formed pelvis and lower limbs of a male child, with the parts of generation perfectly developed. The connecting medium between the parasitical parts and the child was about two inches long, two and a half inches wide, and one and a half inch thick. A little higher than the centre of this medium of communication, and deep in its substance, a hard substance could be felt, extending from the body of the child about an inch and a half, and seemed to be formed by the prolongation of the ensiform cartilage. The limbs had no muscular motion, but lay bent upon themselves and crossed upon each other. The sense of feeling, however, existed in them as perfectly as in the other limbs. There was no trace of the anus. Urine was discharged once in two or three days in small quantities. The parasite was plump and perspirable and exhibited every indication of being amply nourished. It was moveable, and could be turned one quarter round without difficulty, and without producing any inconvenience to the child — when the rotation was attempted to be carried farther the child cried from pain. The redundant parts were found upon measurement to be as large in all their dimensions as the corresponding parts of the child. Upon a careful examination of the connecting medium we could distinctly feel the pulsation of an artery apparently of large size. When the examination was concluded, Dr. White gave as his opinion to the parents, that a separation by the knife was the only mode of remedying the evil, and that the operation, though unquestionably hazardous, was not,

in his judgment, necessarily fatal—he left the decision of the question whether it should be done, entirely to themselves, but remarked, that if it was a child of his own he should perform the operation. After a little consultation the parents consented to the operation, and the time was fixed for the performance of it four weeks from that time, when the child would be six weeks old.

On the day fixed the separation was made. The child was remarkably vigorous and healthy, and it was the opinion of the mother that the parasitical parts were growing faster than the others. The patient was undressed and held in the lap of an assistant, and two elliptical incisions meeting at their extremities were made on the connecting medium about three-fourths of an inch from the body of the child. The skin and subjacent tissue were found exceedingly vascular, and considerable blood was lost from minute vessels—the hard substance mentioned above was found to be as was supposed, cartilaginous, of an exceedingly fine texture, approaching to ossification. It was of course cut through during the operation. About the centre of the connection, immediately below the cartilage above mentioned, was observed a kind of sheath, which, upon being cautiously opened, was found to contain an artery, vein, and nerve of considerable size. The artery and vein were tied, separately and divided, and the separation was completed. Several vessels were tied during the operation, which, though small, bled very smartly. The child was very faint, and much exhausted after the operation, (which occupied more than a quarter of an hour,) and it was with the greatest difficulty the vital spark could be maintained by the exhibition of cordials, stimulants, etc. After the lapse of a few hours it revived, and passed the night very comfortably. No dissection was made of the parts removed—they weighed two pounds six ounces. The substance divided by the knife consisted of the common integument—a thin layer of very vascular cellular membrane—the cartilage mentioned above—and a portion of fleshy substance in which muscular fibres could be very indistinctly traced. On the third day the

dressings were removed, adhesion had already taken place to some extent, and the wound seemed to be doing well. From this time the little patient rapidly progressed to recovery, without the occurrence of a single bad symptom, and is now as healthy and as free from deformity as any child in existence.

It may be proper to notice, that while in the seventh month of pregnancy, the mother of this child became much interested in the story of the Siamese twins, who were about that time being exhibited in this section of country. She went on one occasion to our county town (when they were expected,) to see them. They were not there, however, and her curiosity was not gratified. The subject continued to occupy her thoughts in spite of her efforts to banish it for a long time. What influence this may have had in producing the malformation of the fœtus with which she was then pregnant, is left to the curious in such matters to decide.

Respectfully yours,

George W. Little.

IV.—Hysteria.

Observations and Speculations on the Pathology of Hysteria; read before the Cincinnati Medical Society. By Charles Woodward, M. D.

Mr. Tate, in his late work on hysteria, has given us a new diagnostic sign of this malady; one which my own limited experience induces me to believe is of considerable value. I refer of course to his assertion that tenderness evincive of spinal irritation, is always present with hysterical symptoms. It is, however, I think, incorrect that uterine derangements are always present in this malady, as he affirms. In this sweeping declaration, he is certainly opposed by the experience of the profession;—for who has not had the most preplexing cases of hysteria where the menstrual secretion, if we can depend upon the statements of our patients, has in no respect

been defective,—where, indeed, no uterine irritation of any kind has been discovered upon the closest scrutiny. Again, who has not observed derangements, organic and functional, of the most serious character, affecting this very organ, without the nervous system being called upon to sympathize in any perceptable manner, or at least in any degree proportionable to that which is supposed to excite the moral and physical derangements, which at times characterize hysteria. The idea that nervous diseases are *essentially* connected with disorder of the uterine functions, is not novel. Some writers of considerable antiquity have expressed the same opinion; and, of consequence, many gratuitous powers were attributed to the organ by them. Many respectable authors of more modern times had maintained the same hypothesis, long before Mr. Tate favored the world with his opinions; so that to deny the *occasional* connection of this organ with disease of the nervous system, would be as preposterous, as, with Mr. Tate, to assert its universality. Indeed, with Dr. Good, we readily admit, that with a morbid condition of the uterus, hysteria is in many instances very closely connected, though it is going too far to say that it is always dependent on such a condition, for we meet occasionally with instances, in which no possible connection can be traced between the disease and this organ, and sometimes witness it in males as decidedly as in females. Denying then, as we do, to the uterus, any *specific* power in the *production* of those diseases, which by common consent are denominated *nervous*, we are forced to conclude that to the brain and spinal cord, more rationally than to any other part of the system, are ascribable those mysterious and sudden metamorphoses, which invariably, in a greater or less degree, attend or constitute the disease under consideration. Changes which ever have, and probably ever will, bid defiance to any attempt at nosological arrangement.

The probability of this opinion is supported by what little is actually known of the influence exercised by the nervous system, over the vascular and muscular functions, though to attempt to fix the degrees of diseased action in the brain and

spinal marrow, by any inference drawn from the innumerable forms of disease simulated by hysteria, would only be time lost.

Fortunately for society, this affection, often so truly distressing, rarely terminates fatally; and thus, but very few opportunities are afforded, by post mortem examinations, for drawing correct inferences on the true nature of the disease. Modesty, therefore, requires the acknowledgement, that but little is certainly known concerning it. In fact, from the rare mortality of these affections, we can have no standard of comparison, by which to estimate the condition of the brain and spinal marrow, in various nervous complaints. Indeed, the complex relations of the nervous system taken in connection with our moral as well as physical nature, must ever remain the subject of curious yet uncertain speculation; and, consequently, our views of hysteria must continue in a great degree unsatisfactory.

It will be observed, from these remarks, that I consider spinal or encephalic irritation, however obscurely presented to our observation, as essential to the phenomena of hysteria; and that the uterine functions are not unfrequently perverted, either in the relation of cause or effect. The first proposition is in accordance with the views of Mr. Tate, and requires no further consideration; the second, however, denies his position of the universality of uterine derangement, and confines it to an occasional occurrence.

If, as Mr. Tate ingeniously argues, the disease is uniformly dependent upon uterine derangement, the fact quoted above from good authority, that it occurs occasionally in males, remains unexplained. This fact might perhaps have yielded to the weight of evidence adduced by Mr. Tate, if we had the authority of Good, *alone*, to oppose to it; but when upon reference we find that Cullen, and Caldwell, and Dewees, with other illustrious names may be brought forward to sustain us, we feel safe in calling upon the gentleman for a stronger and more extended evidence, before we can acknowledge our conviction of the correctness of his pathology. Cases could

easily be adduced from the experience of every practical physician, which would conclusively disprove this fundamental proposition in the useful little work to which we have alluded. But it may, perhaps, with more plausibility be urged by the supporters of the opinions of Mr. Tate, that in the spirit of opposition, we have confounded *hypocondriasis* with *hysteria*, and have carelessly or disingenously overlooked the *diagnostics* of these two somewhat similar affections, or, in other words, that we have improperly attributed to a hysterical condition of system, that unpleasant chain of morbid nervous association, which only characterizes hypocondriasis. It is true that both these diseases may very properly be classed among nervous affections, and that to a superficial observer, their slight resemblance may be considered sufficient to establish their identity, but in truth their distinctive features present too broad a line of demarkation to be so mistaken, if due attention be paid to them. The diagnostics are, in fact, simple and few, and to identify them would be the result of ignorance, or of that blinded enthusiasm, by which favorite theories, however absurd, are occasionally supported. It may be well to present a few of their diagnostic peculiarities. 1st. Though spasmodic affections are liable to occur in both of these diseases, it will be admitted they are neither so frequent or so severe in hypocondriasis as in hysteria. 2nd. Persons liable to hysteria are sometimes affected with indigestion, though more frequently they are entirely free from any gastric or hepatic affection. Hypocondriasis is strikingly characterized by functional derangement of the stomach and liver, and not unfrequently by structural lesions of both. 3rd. But the constitutional temperament, and the period of life of the occurrence of these complaints afford, also, very important grounds of difference. Hypocondriasis generally affects those of bilious and melancholic temperament—hysteria, the sanguine and plethoric:—the first rarely occurs very early, or the last very late in life—the first becomes aggravated, the latter relieved by an advance in years.

These few distinguishing peculiarities ought to prevent the

possibility of confounding the two forms of disease, or at least shield us from the imputation of ignorantly identifying them, in the opposition we have manifested to the opinions of Mr. Tate, in reference to the universality of uterine disease. We are, indeed, forced to the conclusion that he has viewed the subject in a manner entirely *ex parte*, and that for the sake of supporting his theory, he has neglected to report cases calculated in any degree to militate against his favorite hypothesis. This part of the subject has been thus exhibited, from the conviction that, by locating the disease under consideration uniformly in the uterus, he has attributed to that organ a sympathetic power over other parts of the system which it in no respect possesses, and that he has deprived the brain and spinal cord of that physiological importance which they certainly deserve, in consequence of the acknowledged influence they exercise over every moral and physical faculty. It is true, no direct evidence can be presented, that the brain and spinal marrow are the seats of hysteria, for the disease rarely proving fatal, opportunities of dissection, as already remarked, are by no means frequent. Even Dr. Dewees declares that he has no recollection of ever having observed a *post mortem* report of this disease, in which the condition of the brain was particularly noticed; and on the same subject he proceeds to quote the observation of Dr. Whytt, that although it appears from dissection of those who have died of nervous affections, that the stomach and intestines, liver, spleen, *omentum*, messentary or *uterus*, have frequently been found obstructed, scirrhous, or otherwise unsound: yet, in as many other cases, of the same disorders, no such morbid appearances have been observed after death.

It follows, that these symptoms may frequently proceed from causes which, eluding our senses, are not to be discovered by dissection. Nay, obstructions, scirrhi, and other disorders of the viscera, are observed in those who have died after suffering long from nervous ailments, seem sometimes to have been the consequence of a long state of bad health, rather than the causes of it. With these difficulties in the way

of a correct pathological inference, we feel the better satisfied to rely for the establishment of our views of this disease upon what evidently appears to be its *remote and exciting causes*, and upon the singular phenomena which it almost uniformly presents.

We have already referred to the brain and its appendages, as the true seat of hysteria, and though we cannot demonstrate the peculiarity of the change, which, from the variety and violence of the symptoms, we are forced to believe exists; still we think we are justified in our conclusions, from a careful examination of the phenomena which are manifested in the progress of the disease.

The observations of Dr. Samuel Jackson, on this subject, are clear and expressive of our own sentiments:

"The brain," he remarks, "is a collection of organs, of nearly similar composition, which preside over the various intellectual and pathetic faculties, and voluntary motion. The medulla oblongata appears to be the central organ of perception, and volition, and its lower portion, and the upper part of the spinal marrow, govern the expressions and the respiratory muscles. Irritation of the upper portion of the medulla, occasions spasms, convulsions, etc., of the voluntary muscles, and of the lower portion, irregular and spasmodic contractions of the muscles of respiration, of the voice, and of the face, as expressing the passions. Hence the sense of suffocation, sighing, screaming, laughing, crying, weeping, coughing, and the various distortions of the countenance. Individuals who experience frequent attacks of hysteria, have this portion of the central structure in a permanent state of irritation, of feeble grade, and which is increased by any sudden and strong impression, an unexpected noise, sight, or intelligence, becomes in them an exciting cause of hysteric paroxysms. Venereal irritation, sufficiently intense to be transmitted to the brain, is often communicated to its central organ, and excites the symptoms of hysteria. The stomach and uterus are those parts from which this irritation is most commonly transmitted, and is effected through the *great sympathetic*, which anastomoses with the pneumo-gastric, or par vagum, that has its origin in the medulla oblongata."

The nerves, to a morbid condition of which Dr. Jackson very properly refers most of the phenomena of hysteria, are such as connect the internal organs of respiration with remote parts. The respiratory nerves have no ganglia at their origins; they come off from the medulla oblongata, and the upper part of the spinal marrow; and from this origin they

diverge to the numerous muscles and other parts, which are combined in the motions of respiration, although they are supplied with nerves from other sources.

Among these nerves, as more immediately connected with the subject before us, may be enumerated — 1st. The par vagum, or pneumo-gastric nerve; 2d. The respiratory nerve of the face; 3d. Superior respiratory nerve of the trunk; 4th. Great internal respiratory nerve, (phrenic or diaphragmatic;) 5th. The external respiratory nerve; and, 6thly. As connected in a greater or less degree with all the rest, the great sympathetic or ganglionic.

Now when the portions of the medulla oblongata and spinal marrow, whence these nerves arise, are morbidly affected, the parts upon which they are distributed become disordered in their functions, whether the remote cause was moral or physical in its nature, or acted primarily on the nervous centre, or on some distant part. It is well known that when the passions or emotions of the mind are too actively excited, the liver and stomach are liable to be seriously affected, the one to the more abundant secretion of bile; and the other to the effort of throwing it off. On the contrary, when from any cause, the mind is depressed by melancholy, the liver ceases in a great measure its important functions, the bile is not duly elaborated, the bowels consequently become torpid, and the stomach dyspeptic, and these disordered organs, reacting through the medium of their nerves, upon the cause of their own derangements, increase the evil, and involve the unhappy subject in deeper ruin.

Hence the danger of mere moral affections becoming in time decidedly physical, unless suitable means are instituted to destroy the chain of morbid association. This condition of things not unfrequently attends hysteria, until a slight nervous irritation terminates in the most inveterate functional disorder, and even proceeds to structural derangement of an altogether incurable character. When this is the case, revealed as it is, by post mortem examination, the effect often passes for the cause, and incorrect pathological views are conse-

quently entertained. The powerful sympathy existing between the brain and the uterus, after the female has arrived at adult life, becomes in some constitutions a constant source of irritation. The two organs are capable of acting and reacting upon each other, in a manner truly anomalous, for we find between no others a sympathy proportionate to this; we need not therefore be surprized, that uterine irritation, whether excited by excessive venereal orgasm, by exposure to atmospheric vicissitudes, or by any other physical or moral cause, in *persons predisposed to hysteria*, should, by extending its influence through the great sympathetic, to the brain and respiratory nerves, increase the general irritability of the system, and give rise to all the aggravated phenomena discovered in the vascular, muscular, glandular, and lymphatic systems. We believe this is *not unfrequently* the case, where we find the menstrual secretion defective in any respect, in nervous temperaments; but that this is to be esteemed the correct pathology of hysteria, *uniformly*, is not only at variance with the experience of every practical member of the profession, but is also at war with the long catalogue of symptoms which often exist in hysteria, *independently* of any perceptible deviation from health in the uterus. As before remarked, the brain and its appendages have a most extensive chain of sympathies, every one of which can in a greater or less degree contribute to the formation of the symptoms characterizing this complaint. If, for instance, from any cause, the *gastric filiments* of the par vagum, are morbidly affected, so as to become the principal seat of sympathy, we shall have a chain of gastric symptoms presenting themselves, such as eructations, sour belchings, gastrodynia, pyrosis, indigestion, and the globus hystericus, without there being necessarily a single sympathetic or associated action with the uterus. If the nervous branches from the great sympathetic, which supply the intestines, become the concentrated point of nervous irritation, we may find tympanites, spasms, diarrhœa, or costiveness, with painful and sometimes spasmodic contractions of the abdominal muscles. If the hepatic plexus becomes, as is very often

the case, in melancholic constitutions, the point of diseased sympathetic action, we shall find the liver essentially disordered, the secretion of bile, being either diminished, increased, or in some manner vitiated and unfit for the purposes designed: pain in the right side, with an unpleasant sense of fulness, and, where the irritation has been of very long continuance, structural derangement ensues, biliary calculi are found in the gall bladder, and sometimes extensive lesions of the organ itself, terminate the sufferings of the patient. This condition of the liver, and the nerves supplying it, is, we believe, more frequently dependent on that state of the brain which constitutes melancholic, than hysteria; several of the enumerated symptoms, may with equal propriety mark some of the more aggravated shades of hysteria.

If the nervous fibres supplying the kidneys become the medium of an irritative sympathy, we have an immoderate flow of pale or limpid urine; a symptom, by the by, which is *often* presented to our attention in these perplexing complaints: sometimes, however, the secretion is diminished, of a high color, and very offensive. Bloody urine is occasionally evacuated, and a pain in the part is sometimes felt, resembling the passage of calculi along the ureter. These extreme symptoms, and especially the bloody urine, we believe are presented only when the sympathies have existed long enough to have established organic derangements which may exist independent of the original cause.

Other parts of the body, as the heart, the bladder, and the scalp, are points of morbid sympathy, and present to the observing physician the symptoms which might be anticipated from diseased action interrupting the healthy performances of the functions of these important parts of the human economy. When the nerves of the heart are more particularly called upon to participate in the nervous derangement, we perceive palpitations which at times are exceedingly harrassing to the unhappy sufferer. If the bladder become the point of morbid sympathy, we occasionally find retention or incontinence of urine, and mucous discharges. We have not been called

upon to witness these forms of the disease, but we should presume, if not quickly counteracted, they might assume a dangerous aspect, and defy the ordinary routine of practice.

Of the last form to be mentioned, we have seen but one instance, and that was truly the most perplexing case of hysteria we have ever been called upon to contend with. We allude to the affection of the scalp. This form is said to be attended with a coldness on the top of the head, or a sense of heat on the back part, great tenderness to the touch, etc., etc. In the case now alluded to, besides the above symptoms, we observed a spongy puffiness of the top and back part of the head, with a manifest *pointing* at the vertex. Such were the symptoms presented by a young lady about 17 years old, by whom I was consulted in the fall of 1827. Hitherto no hysterical paroxysms had been observed, no catarmenial derangements were discoverable, in a word, but for the singular appearance presented by the scalp, she would have been pronounced in good health and far from the probability of disease. She had a most luxuriant crop of hair, to the ornamental character of which she was by no means unconscious, and with female nicety she braided and tied it, so as to draw upon the stretch the affected part of the integuments. To this I at first attributed the disease, and as there was apparently a strong tendency to suppuration, I removed a part of the hair, and applied poultices. In a few days from the *appearance* of fluctuation, I punctured the swelling with a lancet. No purulent matter followed, and my patient immediately fell into a profound coma, from which in a few hours she was roused, only to become the victim of the most distressing series of convulsions I have ever witnessed. These painful scenes were renewed almost daily for weeks and months, withont any decided alleviation from the long list of pharmaecutic agents which were suggested by my own mind, and some of the most practical men of the profession. Neither my consulting physicians or myself, suspected the true character of the disease, but from its obstinacy our worst fears were excited, lest some cerebral irritation of an incurable character existed.

By one gentleman of considerable surgical eminence, it was proposed to lay open the scalp by a free incision, and even to trephine the skull, to discover and drag to light the hidden enemy. To this I did not consent, but finding but little assistance in the advice of my consulting friends, I ordered the whole scalp to be shaved, and the Tart. Emetic ointment to be freely used over the head and back of the neck. When the pustular effect was freely and painfully excited, the disease began to yield;—the syncope and convulsions with her mental disquietudes gave way, she regained a tolerably good share of health, married, and became a mother. Her constitution, however, had received a blow, from which I fear it will never entirely react.

The practice in this case was nearly the same with that of Mr. Tate, though it occurred long before his views were ever given to the public. But what he considers *essential* to the existence of hysteria was absent, and would probably have tended to embarrass his pathological conclusions, as it certainly did our own. Perhaps, however, his professional sagacity would have detected some slight shade of uterine derangement sufficient to have established his views which, to other and less skilled observers, would have remained entirely unobserved.

The nerves of certain organs are more liable than others to sympathize, with the irritations to which the brain and spinal marrow are, from a thousand inappreciable causes, exposed, and the phenomena of hysteria are always exhibited by the manifest derangement of those parts of the system which, in different constitutions, are most easily acted upon. Hence we find the stomach in one the seat of diseased action; the intestines, in a second; the liver, in a third; and the uterus, in a fourth, etc.

That the uterus is most commonly called upon, we think is sufficiently evident, from the frequency of the menstrual deficiencies by which hysteria is attended. But if uterine derangement is *uniformly* to be considered the *cause*, as Mr. Tate alledges, how can we explain the *spinal irritation*, which

we believe always in a greater or less degree exists. Can we presume that this irritation of the uterus is necessarily communicated to the spinal nerves, let its grade of diseased action be what it may? If so, we might expect to find the same pain on pressure of the spinous processes in uterine derangement, without hysteria, as we find with it, a point which we conceive would scarcely find an advocate in Mr. Tate himself.

But, admitting the point here assumed, why does he apply his powerful irritants to the spinal column, before he removes the *cause* of the evil. He acknowledges that such irritations do succeed, before the depraved secretions of the uterus are restored to their healthy character, and he confessedly resorts to measures to effect *this* last result, *secondarily*, only to prevent a *return* of the symptoms; but this he does after the morbid association has been interrupted by the Tart. Emetic ointment, a fact quite sufficient to stagger our faith in his hypothesis. We have, however, admitted the importance of the diagnostic mark he has so judiciously enforced upon our consideration, and believe it to be entirely owing to an extension of the *irritating cause*, whatever that may be, which, (whether constitutional or perhaps local and accidental, but excited by a thousand varied means,) is propagated through the medulla oblongata, to the *great sympathetic*. This important agent in connecting and sustaining the sympathies of the more important parts of our physical constitution, being thus morbidly excited by its influence, as we have already seen, disorders the functions of the various organs, laboring itself under increased excitement, as well from a specific influence, as from the reaction of the organs affected by it, it is found while passing down the spinal column, to extend its sinister influence even to the neighboring integuments, imparting that painful sensation when slight pressure brings these integuments into contact with the resistance of the spinous processes. "What renders it more probable that the brain, or at least the origin of the nerves of this organ, is the seat of that condition which gives rise to the convulsive motions

in hysteria, are the experiments and observations of Dr. Philip, in his "Enquiry on the relation between the nervous and sanguiferous systems." He says, "that neither mechanical nor chemical stimuli applied to the nervous system excite the muscles of voluntary motion, unless they are applied near the origin of the nerves and spinal marrow." Dewees, p. 472.

This fact, discovered by this ingenious experimentalist, goes not a little way to establish the above hypothesis, and enables us with somewhat more of pathological accuracy, to apply our external irritants, with the view of breaking in upon the chain of morbid associations, which we think so certainly exists. The practical illustrations of Mr. Tate will give us not a little confidence in testing candidly the principles he has so enthusiastically espoused. We ardently hope that a more systematic enquiry into the character and multiform features of this disease, than has as yet been instituted by the profession, will ere long lead to results the most happy to the community.

Cincinnati, March, 1835.

V.—Strangulated Hernia.

Case of an Inguinal Hernia which had existed two years without inconvenience, but finally becoming strangulated, an operation was demanded. It was performed by Wm. Mount, M. D., of Cummingsville, O. Reported by C. R. Cooper, M. D., Assistant Editor.

On the 2d of May last, Dr. Mount and I were called in consultation with Dr. Bailey, (eight miles from the city,) in the case of Mrs. A———, aged about 30. The report she gave of herself was, that in consequence of excessive fatigue from walking and over exertion, the day previous, her bowel had protruded, and that since then she had been suffering

much pain in the part, accompanied by vomiting. She carefully concealed the fact that she had been ruptured two years before, and that the tumor had always remained, though somewhat lessened in size. At the time we saw her she was laboring under some pain, and tenderness of the entire abdominal region, more particularly across the umbilicus — did not complain of very acute pain in the tumor, except upon pressure. The taxis was immediately resorted to, but without any advantage, — as auxiliaries to it, free blood-letting, nauseants, the tobacco-poultice to the part, (strongly recommended in the Journal of Professor Jameson, of Baltimore, now Professor of Surgery in the medical department of Cincinnati College) were prescribed, yet still without the slightest benefit. It was not till every effort failed, every hope of relief (by the means ordinarily used) fled, and the strength of the patient declining, that it was determined to resort to the knife.

The situation of the patient was then, as before, fully explained to her; the dangers and difficulties that might be attendant upon the proposed operation, and the necessity that existed for its immediate performance. She consented, but there was considerable hesitation on the part of her friends and relations; at length they yielded to the exigencies of the case, and resolved, that as it held out the only prospect of relief, and as death was inevitable under existing circumstances, the operation should be performed.

Every thing being now in readiness, and the patient placed in the best position, the operation was begun by grasping the tumor with the left hand, and making the incision with the other; commencing at the upper superior part and extending to its base. The tumor was cut down upon with great care and caution, and after the exposure of the superior surface of the sac, the difficulties were seen to be but beginning. It was then found that this hernia was not one of yesterday's origination, but was of long standing. It was at this point of the operation that the interrogatory was put to her, Have you ever been ruptured before? To which she replied, she had two years before, and that the tumor had always remained.

We discovered that the entire sac was adhering to the surrounding tissue, by strong fibrous bands, which required division with the knife. This circumstance occurring, and unexpectedly, rendered the operation much longer and more tedious than was originally anticipated. Yet, after this general obstruction was removed, so that the finger could be introduced to the point of the stricture at the opening of the external ring, and a division of this tendon effected, together with the bands across the neck of the sac, forming also a part of the stricture, the reduction of the hernia was easily accomplished. It was at first contemplated to return the intestine to the abdomen, and leave the sac to be obliterated; but after it became requisite to destroy this union across the neck of the sac, it was deemed expedient to replace both sac and contents.

The operation developed satisfactorily the cause of our want of success in the application of the taxis — evinced clearly that every effort made to reduce the hernia in this way must have proved ineffectual: because, bound as the sac was by bands of a strong and firm character to the parts adjacent, and constituting also a part of the stricture, it would have been impossible to have returned the intestine to the abdomen, much less both sac and contents. Great apprehensions were entertained lest inflammation might be induced, from the force and violence necessarily exerted to break up this great extent of union; but no unpleasant symptoms manifested themselves, and the patient in a short time recovered, and is now well.

It is true this is an operation of frequent occurrence in the wards of great hospitals and almshouses; yet it is not often we meet with a case under precisely similar circumstances to the one detailed. We know, from the statement of the patient, that this tumor had existed for more than two years, and we cannot suppose that it was made merely by a doubling of the peritoneum constituting the sac, and absolutely of itself forming the tumor; but we must believe that a portion of the bowel was also contained in it — thus showing that a

protrusion of intestine through the parietes of the abdomen may exist for an indefinite length of time, and yet not necessarily be impeded in its functions. This woman had become pregnant during the existence of this hernia; proceeded to the full period of utero-gestation, was delivered of a healthy child, and in all this time suffered no inconvenience from it.

The result of this case illustrates clearly the impropriety of allowing a hernial tumor to remain, even though unaccompanied by pain or inconvenience, as it must to a certainty, sooner or later, be the source of much danger and probably death. It speaks the language of reproach to that surgeon or physician whose services may have been called into requisition, and who either made no effort at all to reduce it, or, if any, a slight one; and because the patient was comparatively free from pain, quiets her apprehensions and leaves her to reap the bitter consequences that invariably flow from ignorance and want of skill.

We are gratified to state that Dr. Mount, the operator in this case, is one of our country brethren. From their isolated situation it is not often we find them possessed of the intrepidity or courage to undertake the performance of the more ordinary operations of surgery, much less the accomplishment of one ranking among the boldest and most prominent, requiring the most thorough knowledge of the anatomical structure involved in the operation, with much adroitness in the use of the knife. Although he has been for some years a practitioner of medicine, he is comparatively young as an operative surgeon, yet from his devotedness to his profession, from the zeal with which he pursues the investigation of disease, and the ardent desire he possesses for the acquisition of professional learning, much may be inferred of his future usefulness.

Cincinnati, June, 1835.

VI. — Lesions of the Blood.

A Treatise on Pathological Anatomy. By G. Andral, Professor to the Faculty of Medicine of Paris, Member of the Royal Academy of Medicine, etc. etc. Translated from the French by R. Townsend, M. D. and W. West, M. D. 2 vols. 8 vo. First American Edition, New York, 1832.

(By a Correspondent.)

Although this work was reprinted nearly or quite as far back as three years ago, yet as the subject on which it treats is one that has hitherto attracted but little attention in this country, there is much reason to believe that it is not so generally known as it should be. It is not our design, at this late period, to enter upon a formal review of this valuable treatise; for, however ably this might be done, it would be but ill calculated to convey an accurate idea of the immense debt under which M. Andral has placed the physicians of the nineteenth century. It may be unhesitatingly asserted, that he has accomplished in pathological, what his countryman, Bichat, effected thirty-five years ago, in general anatomy; and, although he cannot be said, like his celebrated predecessor, to have created the science on which he so admirably and profoundly descants, it must be admitted that he has been the first to raise it to that

exalted rank which it is destined, henceforth, to hold amongst the different departments of the healing art. Like the author of the "Anatomie Generale," the name of Andral will be handed down to the latest posterity; and his work be acknowledged as an imperishable monument of his untiring industry, his genius, and his talents.

Pathological anatomy may justly be considered as the creation of the present century, for it is only within the last twenty or thirty years, that it has begun to assume the form of a regular science. The works of Bonetus, Wepfer, Valsalva, Schenke, Fantoni, Vander-Wyl, Morgagni, and others, although abounding in valuable facts, contain little more than mere collections of cases, drawn up frequently with so much diffuseness and so great a want of accuracy, as to render them, in many instances, of comparatively little utility. The pathological anatomy of these writers, indeed, is quite a different thing from the pathological anatomy of the present day; for, as they were in complete ignorance in regard to the properties and functions of the various tissues which enter into the composition of our frame, it follows, as a matter of course, that they must have been utterly incompetent to detect those minute alterations which are consequent on disease, and which have since been so ably described by some of the French and German writers. The publication of the "Anatomie Generale" may, therefore, be regarded as the period from which we may date the history of modern morbid anatomy; the brief but lucid pathological remarks which the author of that great work has appended to his account of the normal tissues, form unquestionably the foundation of all that has since been done or written on the subject; and had he been permitted by an all-wise Providence to reach the age which is ordinarily allotted to man, there is little doubt but that he would have made the study of morbid anatomy his chief pursuit. As it was, his last days were devoted to the subject, and the little treatise which was published a few years ago, under the title of the "Last Course of Xavier Bichat," although wofully mangled and distorted by the American translator, fully attests the

growing interest which that great master-genius manifested in the cultivation of this delightful department of medicine.

At no period has the study of morbid anatomy been pursued with greater ardor and success than within the last fifteen years. During this short space, a vast body of facts has been accumulated, and scarcely a day has elapsed without some interesting discovery. The march is still onward, and it scarcely requires the aid of prophetic vision to foresee the immense benefits which a proper and profound cultivation of this science is destined to confer upon the human race, by the changes and improvements which it must necessarily effect in the treatment of accidents and diseases. Whilst mere descriptive anatomy will become dry and wearisome, or be tolerable only as it may have a tendency to lead to a more accurate comprehension of the various functions of the body, or to a more precise knowledge of the relations which one organ or structure bears to another, pathological anatomy, dressed in the inviting garb of morbid physiology, will enlist the admiring attention of the student, and draw him, as with an irresistible charm, to her shrine.

Nowhere, perhaps, is this science more fully appreciated at this moment than in the French and German schools, in which it is now uniformly taught as essential to graduation. So fully was the celebrated Dupuytren, whose death has been so recently deplored by the medical profession throughout the whole world, impressed with the importance of pathological anatomy, that he made a provision of $40,000, in his last will, for the purpose of instituting a chair for that department; thus compensating, if I may be allowed the expression, in some degree, for his own loss, by the new impulse which these means will have a tendency to excite amongst the younger practitioners of medicine in the French capital. In England, too, the science is making rapid strides; and the creation of separate professorships in her more respectable institutions, and the writings of some of her more distinguished physicians, especially those of Abercrombie, Craigie, and Carswell, all attest, incontestably, that this branch of anatomy will here-

after receive that attention, to which, from its vast importance, it is so justly entitled.

But, whilst we thus look with delight upon the cultivators of this science amongst other nations, is it not a subject of deep regret and mortification, that America, already so distinguished for her intellectual strength and her improvements in some of the other departments of science, should not be able to afford a single individual eminent for his attainments in pathological anatomy? With the exception of Horner, Geddings, Morton, and one or two others, there is scarcely a physician that has manifested the slightest interest in behalf of this science; and to show how little it is regarded by the profession generally, it is only necessary to refer to the fact, that there is not at this moment a *single school* in which it is taught as a regular course of lectures. This, indeed, is a most melancholy circumstance, and it were high time, it seems to us, both for the honor of our profession, and for the well-being of our fellow men, that this unwholesome lethargy should be converted into something like a healthful reaction. The time is at hand when our whole system of education must be reformed, and when the student must begin to learn his profession by commencing at the Alpha instead of the Omega, as has been heretofore the case.

But to return to the work of M. Andral. As already hinted, it is not our design to enter into an elaborate account of it, but merely to give such extracts, interspersed with occasional remarks, as will be likely, from their novel character, to interest the reader. With this view we shall take up the consideration of the pathology ofthe blood, which occupies the last thirty pages of the first volume of the work before us.

There was a period in the history of medicine, when the blood was invested with a degree of importance, of which, in more modern times, it has been in a great measure deprived. For many centuries almost every disease was attributed to a morbid condition of this fluid, whilst the solids which are formed by it, were entirely neglected as objects of little or no consequence. Though it cannot be doubted that during the

prevalence of the humoral pathology, as it has not been unaptly denominated, too much stress was placed upon the blood, yet it is equally true that during the reign of solidism, which immediately succeeded, and which, until the present moment, has been the prominent doctrine of physicians, this fluid has lost too much of its former consequence. "The humoral pathology," says Bichat, "has no doubt been carried too far; but it is, nevertheless, founded on truth, and *in a great many cases*, it must be confessed that almost every thing should be referred to a deranged state of the humors." The idea which was thus thrown out by Bichat was almost forgotten, as it was neither followed up by himself nor his contemporaries; but in the progress of science it is easy to foresee, to use the language of M. Andral, that the theory of exclusive solidism must be eventually rejected, as being incapable of affording an explanation of every case of disease; and that it will be necessary, ere long, to have recourse to some other system for a more satisfactory solution of the difficulty.

Although I do not feel disposed to attach that great importance to the blood which the advocates of the humoral pathology did, it cannot be denied, that it is decidedly the most essential fluid in the animal machine, inasmuch as it furnishes the various materials which dispense vitality and nourishment to the different tissues of the body, as well as vigor to its several organs, serving thus, in the expressive language of some of the ancient writers, as the *pabulum* of life. From it, all the solids are formed, and all the other fluids secreted; and hence it may be justly considered as the basis of every part of the body, as without it, it would be utterly impossible for any growth whatsoever to take place. Pervading every portion of our frame and penetrating every fibre, however minute or however constituted; acquiring constantly new properties as it moves through the lungs, and losing them again in its meanderings through the body; it is not at all improbable, that, whilst it thus fertilizes the various textures and organs, it may convey alike the elements of general health and of general disease. As long as it retains its normal condition,

it must give rise to normal actions, calculated to stimulate the whole system, and rouse it to the performance of its natural functions. An alteration in its natural properties, although so slight as to be scarcely cognizable to our senses, would be followed, it is reasonable to suppose, by a corresponding impression upon the solids. In inflammation, especially in that variety called pleurisy, it undergoes important changes, assuming, as we shall presently see, a peculiar appearance, termed the buffy coat; in dropsy it has a thin watery aspect, not unlike weak claret; in plethora, on the contrary, it is thick, of a deep red, firm, and opake.

The blood, then, being in such intimate combination with the solids, it would almost follow, as a necessary consequence, that they would exert a mutual influence upon each other in disease, especially if it produced considerable general derangement. "If we analyze the blood and the solids," says M. Andral, "we discover that they are made up of the same proximate principles. If we examine their physical structure, we find it identical, both consisting of globules mixed with an amorphous substance." Bordeu acknowledged this identity of composition when he said that the blood is fluid flesh, "*Le sang est de la chair coulante.*"

"Thus then in the three-fold respect of the vital phenomena,* intimate structure, and chemical composition, no line of demarcation can be drawn with strictness and precision between the blood and the solids. Physiologically speaking, it is impossible to conceive that one of these two parts of the same whole could be modified without the other being so likewise. On the one hand, inasmuch as the blood nourishes the solids, and as without its presence they cannot

*It is admitted that the phenomena called *vital* do not display themselves unless in certain states of arrangement of the particles of the body, termed *organization;* but the meaning of this last word is far from being fully determined, and we must not imagine that manifestations of vitality can occur only where there exists an organization such as is observed in the higher order of animals, and such as we are accustomed to figure to ourselves as existing in every case. If we follow the series of living beings, we shall find the vital organs gradually diminishing in number and complexity; nay, even disappearing altogether, and yet life continuing. Life exists likewise in the seed in vegetables, and in the drop of fluid that constitutes the first rudiments of the embryo in animals; yet in these, we find still less appearance of what is called *organization*, than there is in the blood. We see, then, that vital actions take place without the presence of that peculiar formation to which common opinion attaches the idea of vitality; so that observation, far from leading us to infer that certain conditions of arrangement are necessary for the manifestation of life, teaches us that in a thousand different cases life is revealed to us, not by forms but by acts.

support life, the state of the solids cannot but be influenced by the state of the blood. The chemist might as well say that the nature of a body does not depend on the nature of the elements that compose it. On the other hand, the solids, considered with respect to their relations to the blood, form but two classes: the one contributing to *make* the blood, such as those concerned in the actions of absorption, digestion, arterial circulation, and respiration; the other contributing to *unmake* it, those, namely, concerned in the actions of venous circulation, secretion, and nutrition. No one solid, therefore, can undergo the slightest modification, without producing some derangement in the nature or quantity of the materials destined to form the blood, or to be separated from it. Physiology, then, leads us to the conclusion that every alteration of the solids must be succeeded by an alteration of the blood, just as every modification of the blood must be succeeded by a modification of the solids. Viewed in this light, there is no longer any meaning in the disputes between the solidists and the humorists; the system appears to constitute but one great whole, invisible in the state of health as well as in that of disease; the division of the parts of the body into solids and fluids seems to be a distinction of small importance, and one that is not always just, since it ceases to exist in the intimate structure of the organs, in which all the grand vital phenomena take place, and in which also occur all the changes that constitute the morbid state." p. 390.

Another proof of the intimate union subsisting between the blood and the solids, may be derived from the well-known fact, that the elements of most of the organs, and even some of the secreted fluids are to be found in it. These elements are probably held in solution in a certain quantity of water, and as the blood moves through the various textures of the body, it no doubt constantly deposits them in such a manner as to contribute, on the one hand, to the nourishment of the system, and, on the other, to the repair of its several parts, so as to enable them to execute their healthy functions. Thus, as it passes through the osseous texture, it deposits phosphate of lime; through the muscular texture, fibrin; and so on with the rest of the tissues; whilst in the organs it deposits, though probably in a more complicated manner, the materials which constitute the recrementitial, as well as some of the excrementitial fluids.

When blood is drawn from a vein or an artery, observation has long since made us familiar with the fact, that it separates, in a very short time, into two parts, the one of them being solid, the other fluid. The former, generally termed the crassamentum, cruor or clot, is principally composed of fibrin and

coloring matter; the other, on the contrary, called the serum, consists almost entirely of water and albumen, the latter ingredient being the sole cause of its coagulating when exposed to heat, alcohol, or the dilute mineral acids. The relative proportion which these two parts bear to each other is an interesting object of inquiry, and must, if possible, be accurately determined before we shall be able to speak satisfactorily in relation to their increase and diminution caused by disease. In the healthy condition of the system the quantity of serum has been usually estimated to be a little higher than that of the crassamentum; but according to Dr. Scudamore, the mean average of twelve experiments gave nearly fifty-six and a half per cent of cruor. My own observations, however, would lead me to an opposite conclusion; for, in the great majority of my experiments on this subject, the quantity of serum most decidedly preponderated over that of the crassamentum. The proportion of this fluid, as must be familiar to every physician, is always greater in persons of a debilitated habit of body, than in those who are strong, healthy, and vigorous; it is greater again when coagulation takes place under a low degree of temperature; or in those who are impoverished by poor living or long abstinence. The observations of M. Andral on this point are interesting, and deserve to be noted. "In a great many morbid states the blood," says he, "during life or after death, presents different appearances, constituting so many pathological conditions."

"Thus the fibrin may be altered either in quantity or in quality. In the first place, there are cases in which this principle is more abundant than usual, or at least in greater proportion relatively to the water and albumen. In such cases the blood, when drawn from a vein, forms in the vessel that receives it a clot with little or no serum. These are however to be divided into two classes. In the first class of cases, the fibrin constituting the clot, still contains a pretty large quantity of serum, which may be separated from it by pressure; in these the coagulum has but little density. In the second, on the contrary, the clot is very dense, and a little fluid albumen can with difficulty be squeezed out of it. In the first class the relative increase of quantity of the fibrin is only apparent; in the second, it is real. We must take care not to confound them, as they belong to different states of the system. The very fibrinous blood is commonly called *rich blood:* it may either depend simply on a vigorous constitution, or on certain morbid states.

"In place of being superabundant in the blood, the fibrin may, on the contrary, be quite the reverse. There are, in fact, some persons whose blood, when taken from a vein, presents but a very small coagulum in proportion to the large quantity of serum in which it appears. But, here likewise we must make a distinction. The diminution of quantity of the fibrin may be only apparent; as happens when its particles being very strongly condensed, are much closer to each other than in their natural condition; the clot is then very small and remarkably firm; this occurs very often, for instance, in patients suffering under acute rheumatism. In other cases, the clot is not only very small, but also very soft; and there is then really a deficiency of fibrin. This may be observed in many cases of chronic disease, or in persons with a slender muscular system, and habitually pale skin." p. 392.

The changes produced in the composition of the blood by repeated bleedings, are of considerable interest in a practical point of view; but as yet our knowledge on this subject is very slender. Very recently Dr. Andrews, of Europe, instituted some experiments on this point, in the hope that he might be able to throw some light on it. For this purpose, he made choice of the blood of the calf. The animal was bled from a large orifice in the jugular vein, till symptoms of syncope appeared, and the operation was generally repeated at intervals of twenty-four hours, during which it was usually once fed upon a mixture of meal and water. The appearance of the blood thus drawn became greatly altered by the successive abstractions; in the first bleeding the crassamentum was very large, and a portion of the red globules remained unattached to it, but as the operation was repeated, it gradually diminished in bulk, whilst its consistency augmented, till upon the fourth bleeding, when it appeared like a small contracted ball, immersed in a large quantity of serum.*

This experiment was a number of times repeated, upon different animals, and invariably with the same results; whence it may be fairly inferred that a diminution of the crassamentum, with a corresponding increase of serum, is a very constant, if not an invariable effect, of the repeated abstraction of this fluid from the system. Dr. Andrews further ascertained that there is a sensible decrease of the albumen and

*North American Archives of Medical Science, No. viii. p. 135.

salts at each bleeding; he states, however, that the diminution is very variable, and that even after the fourth bleeding it scarcely amounts to one and a half per cent. In the globules the same diminution takes place, being not unfrequently reduced to less than one-half of their original quantity. These experiments are unquestionably of a highly interesting nature, and it is to be hoped that some physician, endowed with industry and talents, will soon be induced to repeat them. The results would at least be curious, if not calculated to lead to useful precepts in practice.

"The force that tends to keep the globules of fibrin at a certain distance from each other during life, may be so modified as that they shall have a tendency to run together, as they naturally do after death; and hence may result the spontaneous coagulation of the blood in its vessels during life. There have been too many cases of this nature observed, for us of the present day to attempt to deny the possibility of its occurrence. Sometimes it takes place without any known cause; and sometimes it appears to accompany a state of irritation in the parietes of the containing vessel. When the blood once becomes solid, it displays indubitable symptoms of vitality; vessels are produced, and secretions formed in it; and different alterations of nutrition, resembling those observed in the tissues, may also occur. If we examine whence this coagulated blood derives its vitality, we find that it cannot partake of the common life of the rest of the body, since it very often merely touches the surrounding tissues, without being in any manner continuous with them. We must therefore admit that these polypiform concretions, or *polypi*, as they are called, may possess a proper vitality, by means of organs they have created themselves." p. 393.

Many cases of sudden death have the singular effect of impeding the coagulation of the blood, or in entirely preventing it. This is strikingly exemplified in persons who are suddenly destroyed by lightning and electricity; a violent blow on the stomach, or severe injury of the brain; by the bite of venomous serpents, as the rattle-snake and copperhead; by acid vegetable poisons, such as laurel-water or prussic acid; excessive fatigue, as in hunting down wild animals; and even violent agitation of the mind.

It is extremely probable that some of the causes here enumerated, do not invariably produce the effects that have been attributed to them. We are informed, for instance, by Gum-

illa, an old Spanish missionary amongst the South American Indians, that he examined several animals that had been killed by poisoned arrows, in which the blood was completely inspissated, although death took place almost instantaneously: and in regard to death from lightning, the testimony of Sir Charles Scudamore is precisely of the same import. He found that blood through which electric discharges were transmitted, coagulated as quickly as that which was not electrified; and in small animals, destroyed by the discharges of a powerful galvanic battery, the blood in the veins was always in a solid state.

"In certain cases in which the natural consistence of the fibrin is increased, or even without any very decided augmentation of its density, another very remarkable phenomenon is observed; the portion of fibrin at top of the coagulum parts with the coloring matter, and forms a whitish, yellowish, or slightly greenish layer, that may vary in thickness from less than a line to some inches. This layer is known by the name of the *buff*, or buffy coat; and although its formation may be more or less favored by certain circumstances that have nothing to do with the accompanying morbid state, such as the size of the orifice, the manner in which the blood flows, and the form of the vessel that receives it, yet it is not the less true that it can occur only in certain states of the system which I shall presently explain. The buffy coat is formed of pure fibrin, with which is mixed a certain quantity of serum, which, according to the researches of Dowler and of Gendrin, contains much more albumen than the serum of the rest of the blood. The greatest analogy exists, both in respect of appearance and of chemical composition, between the buffy coat of the blood and the substance that constitutes the false membranes of the serous cavities." p. 395.

The inflammatory buff, or, as it has not been unfrequently termed, the *pleuritic crust*, begins to form as soon as the blood commences coagulating, appearing at first like a thin viscid layer, of a light reddish tint, which is spread either uniformly over the whole surface of the fluid, or occurs in small insulated spots, looking like so many little islands in the midst of a body of water. This viscid substance may be drawn out in the form of shreds or filaments, which, on becoming firm, assume a white reddish aspect. The coagulation of inflamed blood begins much sooner than that of healthy blood, and is also more speedily completed. The buffy coat forms as soon

as the crassamentum contracts sufficiently to detach itself from the walls of the vessel in which the fluid has been received, but it does not acquire its full density until the coagulating process is perfected. When this has taken place, it will be found to be dense, elastic, slightly diaphanous, strongly adherent to the cruor which it covers, smooth on its free surface, and rough on the other. If it be carefully separated from the crassamentum, washed in cold water, and then immersed in alcohol, its elastic properties will be greatly augmented, and the membrane will present the appearance precisely of a half tanned hide, or of the proper uterine tissue during pregnancy, making thus a beautiful preparation.

As long as it remains soft the texture of the buffy coat may be completely dissolved in tepid water; but if it has once become concrete, this can be only imperfectly effected. On adding a decoction of nut-galls, the solution thus obtained yields a yellowish coagulable matter; whilst the insoluble part, on being macerated six or eight hours in water, becomes friable, white, rough, and as it were pulverulent, greatly softened and distended, and forming about the twenty-fifth part of the whole mass of the buffy crust. Dilute acetic acid and a saturated solution of the nitrate or carbonate of potass, also possess the property of dissolving this substance, which is augmented in density and consistence by the mineral oxides, in a concentrated state. These chemical characters, however, are, it would seem, by no means constant or uniform; for Galber asserts, that he has frequently seen buffy coats that were neither soluble in pure tepid water, nor in a solution of the nitrate of potass.*

The immediate cause of the buffy appearance of the crassamentum is sufficiently obvious; the globules or other matter which give it the red color, begin to subside before the coagulation is completed, whereby the upper part of the clot is left without them. The remote cause of this occurrence is by no means so obvious as the proximate, notwithstanding the many

*Gendrin's Histoire Anatomique des Inflams. t. ii. p. 431.

experiments that have been made to discover it. Hewson thought that the fibrin became specifically lighter, and of course the red globules relatively heavier, whence they would be disposed to sink to the lower part of the clot; he also thought, which, however, has since been proved to be unfounded, that the blood coagulated more slowly. John Hunter endeavored to account for the appearance by the firmer coagulation of the fibrin squeezing out, as it were, the red particles; but this would scarcely, as observed by Dr. Bostock, explain why the upper part of the crassamentum was left without them. By the celebrated Hey, of Leeds, it was referred to a preternatural action of the vessels, in consequence of which the different constituents of the blood were more intimately blended together. Neither of these opinions, however, it seems to us, are capable of affording a satisfactory solution of the difficulty; and on the whole, the doctrine of Dowler, promulgated for the first time in 1822, is probably more correct than any other that has yet been proposed. This is founded on the well established fact, that inflamed blood always contains a very large proportion of serum, which, by diminishing its vicidity, readily allows of the subsidence of the red globules.

The formation of the buffy coat is also materially influenced by the size of the orifice of the vein, and the dimensions and shape of the vessel in which the blood is received. Sydenham long ago asserted that the inflammatory crust never makes its appearance when this fluid is permitted to flow *guttatim*, or drop by drop; and De Haen was well acquainted with the fact, that a deep, narrow vessel is much more favorable to its formation than one of opposite dimensions. The observations of these distinguished physicians, have been recently confirmed by the results of the experiments of Belhomme, Gendrin, and other pathologists, and may therefore be regarded as fully entitled to our confidence. Time will not allow us to enter into any further remarks on this interesting topic; the facts which have been here referred to are of considerable practical importance, and as such, if for no other purpose, they deserve

to be remembered in making up our minds as to the propriety of the repeated abstraction of blood, when it presents the buffy coat.

"The albumen, which always exists in a small quantity in the coagulum, and which, united with water, almost exclusively forms the serum, may be modified as well as the fibrin. In the first place, there are cases in which, in a given quantity of serum, the albumen is found in much greater quantity than usual in proportion to the water; of this we may easily be convinced by exposing the serum to heat. The researches of Dr. Traill, which are confirmed by the more recent ones of M. Gendrin, have proved, that in the state termed inflammatory, the serum of the blood contains nearly twice as much albumen as in the healthy state. This increase of the albumen may be detected simply by the touch, the serum being then remarkably viscid. In other cases, on the contrary, the very small coagulum obtained by heating the serum, the greatest part of which evaporates, proves how much the quantity of albumen is diminished.

Is it to a particular alteration in the nature of the albumen of the blood we are to attribute the presence of a *mucous layer* that has been sometimes observed by M. Gendrin at the bottom of the serum, or suspended in it like a cloud! In one of the cases he mentions, the blood was taken from an individual affected with empyema; in another, there was a vast abscess in one of the thighs.

The serum, in respect to its composition, presents several varieties that we must not confound: 1. it may contain at the same time much water and much albumen; 2. the latter principle may predominate, the quantity of water remaining the same, or even being diminished; 3. the reverse may take place, and the serum be composed of much water, and little albumen.

Whatever be the composition of the serum, it is sometimes found in small quantity in proportion to the coagulum, and sometimes the reverse is the case. All these differences should be noted, as corresponding to so many particular morbid states." p. 395.

During derangements of health, the serum, like the crassamentum, exhibits various peculiarities. Thus, in inflammation, the serum is more viscid, and of a lighter color than usual, containing, in fact, scarcely the slightest trace of coloring matter. These appearances are less evident when the clot does not float in, or occupy the centre of the serum. This extraordinary viscidity is owing to the fact already alluded to, that the fluid in question contains almost a double proportion of albumen in inflammatory affections than it does in health.

In some instances the serum presents the appearance of

whey, with white streaks floating upon its surface: in others, it has been found to have oil in it; and in others, again, it has been known to be as white as milk, the clot retaining its usual aspect. Mr. Hewson, who considered the red particles of the blood to be flattened, attributed the color of the serum, in these cases, to the presence of very minute globules. Mr. Hunter, in his work on the blood, states, that he once saw the serum separate from, and swim upon the uncoagulated fibrin, immediately after the fluid had been abstracted from the arm; and he likewise mentions that in jaundiced persons the serum, although not bitter is of a deeper yellow than ordinary; a fact which has since been abundantly verified by other observers.*

The presence of oil in the serum of the blood is probably of more frequent occurrence than has been generally imagined. The cases of it upon record, however, are probably few, and the only ones with which I am familiar are those narrated by Dr. Traill, of Liverpool.† In the last case which he has reported, the serum was of a light straw color; and when recent, had the appearance of a homogeneous fluid, of the consistence of cream; but on being kept for a short time it coagulated so firmly as to be poured with difficulty from a glass bottle. On analysis it yielded a large proportion of albumen and *oil*, of a character so pure as almost to burn when exposed to the flame of a lamp. In all the cases that have fallen under the notice of Dr. Traill, the patients, he observes, have labored under internal inflammation, affecting the chylopoietic viscera, and have been more or less addicted to the abuse of strong liquors.

In a case which came under the observation of the writer of this article, in 1832, the surface of the blood, which had been received into a small tin-basin, presented a white cream-like aspect, having formed a layer of about the eighth of an inch in thickness. The patient was a young man, thirty years of age, of intemperate habits, and complaining at the time he was

*Mayo's Outlines of Human Physiology, p. 32.

†Edinburgh Medical and Surgical Journal, vol. xxvii.

bled, of considerable pain in his head and chest, the symptoms in the latter part having been of a pleuritic nature. The blood, as it flowed from the arm, had a perfectly healthy appearance, but it had scarcely stood ten minutes before it assumed the aspect above mentioned. Some of this fluid, having been transferred into another vessel, was allowed to remain at rest until the next morning. On examining it, it was found slightly coagulated, of a strong saline taste, and somewhat heavier than water. It readily coagulated on the addition of alcohol, heat, and the mineral acids; and on being inspected with a microscope it exhibited no appearance whatever of globules; whence the inference is conclusive that it was composed essentially of albumen. The cruor, in this case, was somewhat larger than usual, and of course the quantity of serum less. On repeating the bleeding twenty-four hours afterwards, the blood presented precisely the same appearance.

The blood, considered as a mass, may be altered or affected in various ways. All these changes should be noted, as they correspond to so many particular morbid conditions of the system. In another part of this treatise, M. Andral has mentioned cases in which the blood contained not only the different elements of the secreted fluids, but also various other morbid productions, such as pus, encephaloid matter, entozoa, and calculous concretions. In whatever way these substances gain admission or are developed in the vessels, there is no doubt that by combining with the blood, they may so alter it as completely to change its physical properties, and thus vitiate the living current.

"Now, who could assert that in such cases the blood is not deeply altered in its nature. Besides, most commonly there are at the same time in the texture of many of the solids, morbid secretions, purulent or otherwise, formed of a matter that has the greatest analogy to that found in the vessels. Amongst the cases of this description I have had an opportunity of observing, I shall adduce the following. In a woman who died at *La Charitie* with all the symptoms of a chronic affection of the lungs and of the digestive passages, I found in front of the vertebral column an enormous tumor composed of an agglomeration of lymphatic ganglions, which, instead of their natural tissue, present-

ed merely an inorganic pap, of a greyish or reddish color. A similar substance appeared in the liver, in the form of roundish isolated masses; it was also found in the spleen, in the cells of which it appeared to be deposited in place of the blood they usually contain; lastly, in several points of the lungs, the lobules were infilterated with the same substance. But that was not all; for in both lungs a great number of the branches of the pulmonary artery contained, instead of blood, a curdy matter of a reddish grey color, resembling in appearance the morbid matter found in the mesenteric ganglions, liver, spleen, and lungs. The right cavity of the heart, the pulmonary artery, and its first divisions, contained a blood of little color, and poor consistence. In another woman, who had a broken down cancer of the uterus, all the veins of that organ, and the trunk of the vena cava up to its passage under the liver, were full of a semifluid sanious matter of a greyish or reddish white. In a man far from being advanced in life, who had in a great many organs, encephaloid masses in a state of softening, the inferior vena cava, the renal and splenic, and some branches of the superior hepatic vein and of the pulmonary vessels, were filled with a kind of detritus of a reddish grey color, without its adhering to the venous parietes, which, in this case, as well as in the preceding cases, presented no appreciable trace of alteration. Facts similar to those just mentioned have also been observed by others. Thus, Beclard mentions a case in which the heart and principal trunks of the vessels were filled with a solid clot, the interior of which presented numerous collections of encephaloid matter. M. Velpeau found a mass of encephaloid in the midst of a clot of blood contained in the vena cava. He also cites a case of a man that died almost suddenly, after having shown some symptoms of cerebral congestion, and in whom, upon examination, there was found through the whole extent of the circulatory system, a blood of a pultaceous consistence and blackish red color, resembling the matter of certain abscesses of the liver." p. 397.

The alterations of this fluid, as observed by M. Andral, may be ascertained in still another way than by mere inspection or chemical analysis. It is well known that the blood of one animal may be introduced into the veins of another, of the same species, without causing any particular injury. Where this, however, is not the case, and where the blood of a diseased individual, when transferred into the vessels of another, acts as a poison, the conclusion forces itself irresistably on the mind that the nature of this fluid is really changed. The following remarks, which place this subject in a very clear light, are worthy of special notice.

"M. Gendrin, in his work on fevers (vol. ii. p. 145) gives an account of a flayer whom he attended in a putrid fever with an eruption of gangrenous pustules. An ounce of blood drawn from one of the pa-

tient's veins was injected into the cellular tissue of the groin of a cat. The consequences to the poor animal were copious vomitings of bile, at first yellow, and then greenish, dyspnœa, a small, frequent, and irregular pulse, a dry and brown tongue, a constantly increasing prostration of strength, and, towards the close of the scene, some slight convulsive motions at intervals. Death ensued in six hours and fifty minutes after the injection. The appearances observed on examining the body are described as follows: — The skin of the groin did not adhere to the subjacent parts; the cellular tissue was soft and almost pulpy, and of an ashy yellow color; it exhaled a fetid odor, and was dotted with small red spots; the gastromucous membrane of the stomach and intestines was in the natural state, that of the respiratory passages was of a reddish brown; the lungs, especially the left, contained black blood, and were full of brownish black spots; the blood throughout the whole body was black and fluid; in the left pleura were about two ounces of very serous black blood; the heart was soft and flaccid; there was no appearance of lesion in the brain or spinal marrow; the body speedily began to exhale a fetid odor.

Some blood that proceeded from an epistaxis that occurred in the same patient, was injected into the femoral vein of a dog. The animal exhibited the same series of symptoms as the one in the preceding experiment, which, in like manner, terminated in death.

In another work (*Histoire des Inflammations*, vol. ii.) M. Gendrin relates some experiments in which he injected into the veins of animals the blood of persons laboring under confluent small-pox. Very severe symptoms, which rapidly proved fatal, ensued; and on opening the bodies, several organs were found in a state of high inflammation.

MM. Dupuy and Leuret introduced into the cellular tissue and veins of a sound horse, blood that came from horses affected with malignant anthrax, ("*charbon*") and thus succeeded in producing the disease. It is, then, beyond all doubt, that in this case the blood itself was altered in its nature, since it proved capable of transmitting the affection.

These facts bring to our recollection some others, for an account of which we are indebted to the celebrated Duhamel. He has related a case where an ox, that was over-driven, having been slaughtered at an inn at Pithivers, the butcher put into his mouth, for a few moments, the knife he had employed for the purpose. The consequence was, that in some hours afterwards his tongue swelled, his breathing became difficult, and then blackish pustules broke out all over his body: at the end of four days he died. The inn-keeper wounded himself with a bone of the same ox in the palm of his hand; his arm mortified, and he died in seven days. Two women having received some drops of the blood of the same animal, the one on her hand, the other on her cheek, these parts were seized with a gangrenous inflammation. Is it not likewise the simple contact of the blood of diseased animals that produces malignant postule in man?

From these facts we must conclude that, under certain circumstances, the blood may be altered in its intimate nature, so as to acquire noxious properties, which display themselves when it is mixed with the blood of healthy animals." p. 399.

In cholera, and many other diseases, the blood, as is well known to every accurate observer, is very materially altered, but whether primarily or consecutively it is not very easy to determine. In the former of these disorders, the fluid is drained of its serum; it assumes a dark, semi-concrete appearance; and coagulates almost the moment it is drawn from the vessels, owing probably to the loss of a certain quantity of nervous influence. The effects of cutting the pneumo-gastric nerves on the blood were long ago pointed out by Dupuytren, and have been more recently elucidated by the experiments of Professor Meyer of Germany. This physiologist found that, whenever both pneumo-gastric nerves are tied in animals, the blood in the whole pulmonary system coagulates and the coloring matter separates from the fibrin. Professor Dupuy, of the veterinary school at Alfort, further ascertained, as he thought, in repeating these experiments, that the blood loses a considerable quantity of fibrin; for instance, he took a certain quantity of this fluid from the carotid artery, and found that it contained twenty-one grains of fibrin. In four hours after, the same quantity contained only nineteen grains; at the end of sixteen hours, eighteen grains; at the end of forty hours, twelve grains. In fifty-two hours after the operation the animal died in a state of suffocation; when the same quantity of blood, still taken from the carotid, contained but seven grains of fibrin. The question here naturally presents itself, was this progressive diminution in the quantity of fibrin produced directly by the division of the nerves; or was it merely indirectly, by disturbing more and more the progress of sanguification in the lungs? In all probability the section of the nerves had nothing to do with it; for it is not at all unlikely, though this is not mentioned, that the animal, at each bleeding, lost much more blood than was necessary for the purposes of the experiment; and, if this be admitted, the facts observed by M. Dupuy, although he attempts to account for them in a very different way, will be found to accord precisely with the results of the experiments of Dr. Andrews, alluded to in a previous part of this paper.

"I have now stated the facts and arguments which, in the present state of the science, ought to lead us to acknowledge the existence of certain alterations in the blood. What I have already said on the subject, in my opinion, sufficiently demonstrates not only that these alterations are real, but also that they are often primary, that they precede those of the solids, and that, consequently, the origin of many diseases lies in the blood. If it is true that the mass of the blood may, in certain cases, be primarily altered, it follows that the existence of general disease is not merely imaginary. In fact, when all the tissues thus receive a vitiated blood, is it not consistent with sound physiology to admit that their regular modes of vitality, nutrition, and secretion, must be more or less deeply modified. We must either admit this conclusion, or deny the influence which, according to every physiologist, the blood exerts over each solid. It may then happen that one or more organs are affected in a more decided manner than the rest, and there may thus be produced in them various lesions that are only accidental and secondary; but it is not in these lesions the origin of the affection lay; it is not on them all the symptoms depend; nor, lastly, is it to them alone we are to have recourse to throw a light upon the true nature of the disease, as well as upon the treatment proper to be pursued. Experience also teaches us, that these lesions may be either severe or slight, present or absent, similar or dissimilar, and that, notwithstanding, the disease, though presenting so many different shades in its variable symptoms depending on these lesions, does not the less exist, as it really consists in the constant symptoms depending on the state of the blood.

We must not, however, forget, that different alterations of the blood may exist, and have actually been observed, in persons presenting every appearance of good health. But such persons are on the brink of disease, and if any cause whatever chances to derange the equilibrium of their system, some of the morbid phenomena that occur are sure to depend on the state of their blood."

We have thus passed in review some of the more interesting facts recorded by the author of the "Anatomie Pathologique," and have added such remarks as seemed to be relevant, in further explanation, to the various topics which he has discussed in his able treatise. From the numerous facts that have been adduced, it may be justly concluded, we think, that the blood may not only become a frequent vehicle of disease, but that in many instances it is affected long before there is any manifest derangement of the solids. From the large surface upon which the chyliferous vessels open in the intestinal canal, it is not at all improbable that the elements of disease may, more or less readily, find their way into the current of the circulation, and thus vitiate the solids as they move through the various textures of the body. But, be this as it may, there is no doubt

but that the blood has been too much overlooked in our pathological investigations; and it is to be hoped that the interesting chapter, devoted to this topic by Andral, will have a tendency to awaken the attention of the profession, especially that portion of it who reside in the Mississippi Valley, to the great importance of the subject. S. D. G.

VII.—Medical Society of Tennessee.

Minutes of the Proceedings of the Medical Society of Tennessee, at the Sixth Annual Meeting, held in Nashville, May 4th, 1835.

We regret to be able to count but thirty members present at this meeting—two-thirds of whom we may presume are residents of Nashville. Why are our Tennessee brethren so backward in attendance upon the yearly meetings of their state society? The "*proceedings*" before us, in part supply an answer to this question. It appears that one object of the annual meeting is to listen to medical papers read by the members. Now we hold, that gentlemen will never neglect their business and travel from home for this purpose, when they know that all which they might hear will be published, whether they attend or not. It seems to us, that when the physicians of the different states of the West meet in societies or conventions, they should not engage in scientific investigations, but confer together on the means of uniting themselves into a profession; of giving impulse to study; of promoting objects of public benevolence; and of raising themselves, aggregately, into greater dignity and moral power, than they have yet reached in the Valley of the Mississippi. Meetings for these and similar purposes, would, we predict, be well attended, and could never fail to result in substantial benefits to the profession and society at large.

It appears that Tennessee has a law regulating the practice of physic; and that she has three Boards of Censors. Well, this is not so bad as the twenty-four Boards which lately existed in Ohio! We have, however, but little faith in the efficacy of such machinery for the elevation of the profession of medicine. It strikes us as remarkable, that the Deans of each of the Tennessee Boards should have reported, that since the last meeting of the society, no candidate had applied for examination. Does not this indicate, that the system is disapproved by the people and the profession of that state? Good physicians must be made by love of study, not fear of being rejected by boards of examiners; for, as far as our observation has extended, those who are rejected generally become favorites with the people. They are regarded as persecuted persons, and as such are sure to meet with patronage. Improved methods of study, a more protracted private pupilage, better preparatory education, and greater devotion to university opportunities, are the only safeguards against quackery; and on them alone should reliance be placed.

VIII.—Partial Human Combustion.

An Essay on Spontaneous Combustion, read before the Medical Society of the State of Tennessee, at their Annual Meeting in May, 1835. By James Overton, M. D.

The curious phenomenon of human combustion, from, or without, the contact of fire, has already been brought before the readers of this journal. In the second volume, p. 130–141, is a translation from the French, of a comprehensive memoir on this subject, by M. Marc. In looking into the Essay of Dr. Overton, we do not observe, that since the time when M. Marc wrote his paper, there has been any new suggestion as to the proximate cause of this curious event.

An extraordinary accumulation of hydrogen gas in the cellular tissue of the body, set on fire by an electric spark, or a burning body—the theory of M. Marc, is that of Dr. Overton. The Doctor has, however, made a substantial addition to our previous stock of facts, by a minute account of a case of partial spontaneous human combustion, which lately occurred in Tennessee; and it is chiefly to make a permanent record of this case, that we have introduced the subject.

Prof. H., of the University of Nashville, is a gentleman 35 years old, of middle size, light hair, hazle eyes, and sanguino-lymphatic temperament; he has been extremely temperate as to alcoholic stimulation of every kind; led a sedentary and studious life; and been subject to a great variety of dyspeptic affections. On the 5th of January, 1835, he left his recitation room at 11 o'clock, A M., and walked briskly, with his surtout buttoned round him, to his residence, three quarters of a mile. The thermometer was at 8°, and the barometer at 29.248—the sky clear and calm. On reaching home he engaged in meteorological observations, and in 30 minutes, while in the open air about to record the direction of the winds—

"He felt a pain as if produced by the pulling of a hair, on the left leg, and which amounted in degree to a strong sensation. Upon applying his hand to the spot pained, the sensation suddenly increased, till it amounted in intensity to a feeling resembling the continued sting of a wasp or hornet. He then began to slap the part by repeated strokes with the open hand, during which time the pain continued to increase in intensity, so that he was forced to cry out from the severity of his suffering. Directing his eyes at this moment to the suffering part, he distinctly saw a light flame of the extent, at its base, of a ten cent piece of coin, with a surface approaching to convexity, somewhat flattened at the top, and having a complexion which nearest resembles that of pure quicksilver. Of the accuracy in this latter feature in the appearance of the flame, Mr. H. is very confident, notwithstanding the unfavorable circumstances amidst which the observation must have been made. As soon as he perceived the flame, he applied over it both his hands open, united at their edges, and closely impacted upon and around the burning surface. These means were employed by Mr. H. for the purpose of extinguishing the flame by the exclusion of the contact of the atmosphere, which he knew was necessary to the continuance of every combustion. The result was in conformity with the design, for the flame immediately went out. As soon as the flame was extinguished, the pain began to abate in intensity, but still continued, and gave the sensation usually the effect of a slight application of heat or fire to

the body, which induced him to sieze his pantaloons with one of his hands and to pinch them up into a conical form over the injured part of the leg, thereby to remove them from any contact with the skin below. This operation was continued for a minute or two, with a design of extinguishing any combustion which might be present in the substance of his apparel, but which was not visible at the time. At the beginning of the accident, the sensation of injury was confined to a spot of small diameter, and in its progress the pain was still restricted to this spot, increasing in intensity and depth to a considerable extent, but without much if any enlargement of the surface which it occupied at the beginning. A warmth was felt to a considerable distance around the spot primarily affected, but the sensation did not by any means amount in degree to the feeling of *pain*. This latter sensation was almost, if not entirely confined to the narrow limits which bounded the seat of the first attack, and this sensation was no otherwise modified during the progress of the accident, than by its increasing intensity and deeper penetration into the muscles of the limb, which at its greatest degree seemed to sink an inch or more into the substance of the leg.

Believing the combustion to have been extinguished by the means just noticed, and the pain having greatly subsided, leaving only the feeling usually the effect of a slight burn, he untied and pulled up his pantaloons and drawers, for the purpose of ascertaining the condition of the part which had been the seat of his suffering. He found a surface on the outer and upper part of the left leg, reaching from the femoral end of the fibula in an oblique direction, towards the upper portion of the grastrochnemi muscles, about three-fourths of an inch in width, and three inches in length, denuded of the scarfskin, and this membrane gathered into a roll at the lower edge of the abraded surface. The injury resembled very exactly in appearance an abrasion of the skin of like extent and depth, often the effect of slight mechanical violence, except that the surface of it was extremely *dry*, and had a complexion more livid than that of wounds of a similar extent produced by the action of mechanical causes." pp. 25-26.

His drawers, composed of silk and wool, immediately over the abraded skin, were burnt entirely through, but the scorching had not extended in the slightest degree beyond. The pantaloons, made of broadcloth, were uninjured; but over the affected spot the extremities of the wool were tinged with a kind of dark, yellowish matter, which could be easily scraped off with a knife.

"Considering the injury not to be of a serious character, Mr. H. bestowed upon its treatment no particular care or attention, but pursued his usual avocations within doors and in the open air, which was very cold, until the evening of the succeeding day. At this time the wound became inflamed and painful, and was dressed with a salve, into the composition of which the rosin of turpentine entered in considerable proportion. This treatment was continued for four or five days, during

which time the wound presented the usual aspect of a burn from ordinary causes, except in its greater depth and more tardy progress towards cicatrization, which did not take place till after thirty-two days from the date of the infliction of the injury. The part of the ulcer which healed last was the point of inception and intensity of the pain at the time of attack, and which point was evidently the seat of deeper injury than any other portion of the wounded surface. About the fifth day after the accident, a physician was requested to take charge of the treatment, and the remedies employed were such chiefly, as are usual in the treatment of burns from other causes, except that twice a week the surface of the ulcer was sprinkled over with calomel, and a dressing of simple cerate applied above it. In the space between the wound and the groin there was a considerable soreness of the integuments to the touch, which continued during the greatest violence of the effects of the accident, and then gradually subsided. The cicatrix is at this time, March 24th, entire; but the surface is unusually scabrous, and has a much more livid aspect than that of similar scars left after the infliction of burns from common causes. The dermis seemed to have been less perfectly regenerated than is usual from burns produced by ordinary means, and the circulation through the part is manifestly impeded, apparently in consequence of atony of its vessels, to an extent far beyond any thing of a similar nature to be observed after common burns." pp. 27-28.

IX.—Anatomical Characters of Asiatic Cholera.

*On the Anatomical Characters of Asiatic Cholera, with Remarks on the Structure of the Mucous Coat of the Alimentary Canal. By W. E. Horner, M. D., Professor of Anatomy in the University of Pennsylvania.**

Notwithstanding the vast amount that has been written in relation to the Asiatic cholera, since the first introduction of this disease into Europe and America, it cannot be denied that our knowledge respecting it is still extremely vague and unsatisfactory, being in fact but little better than that of the world in general. The phenomena by which it is characterized, it is true, have been ably pourtrayed both by our own and foreign writers; but, with the exception of the generally

*American Journal of the Medical Sciences, No. xxxi., May, 1835.

admitted fact, that the disease is seated in the alimentary canal, little is known, with any certainty, as to the nature of the anatomical lesions to which it gives rise. Under these circumstances every physician, who has at heart the interests of his profession and the well-being of his patients, must hail with pleasure any effort, on the part of its members, that may have a tendency to throw light—even if it be but a feeble ray—upon the pathology of this singular disorder.

Amongst those who have been most conspicuous for their researches into the nature of Asiatic cholera, none, it may be truly said, hold a more distinguished rank than the author of the paper, the title of which stands at the head of this article. Possessing a rare amount of anatomical knowledge, and commanding opportunities of no ordinary kind, there is probably not an individual in the whole of our profession, that is so well qualified for making investigations of this description as Dr. Horner. The great interest which some of his essays on pathological anatomy have excited, both in this country and in Europe, sufficiently attests their value, and whilst it must prove highly flattering to the author, it cannot fail to stimulate him to further exertion in this extremely useful but hitherto too much neglected department of science.

The object of the essay before us seems, if I may so express myself, to be almost exclusively of a pathological nature, being intended to prove that in Asiatic cholera, the gastro-enteric canal exhibits certain anatomical lesions, which have hitherto escaped the attention of physicians. These morbid appearances may be thus stated:—1. An abundant vesicular eruption, which, extending throughout the whole alimentary canal, is perfectly distinct from the enlargement of the villi and muciparous follicles. 2. A lining membrane of coagulated lymph, similar in its texture and mode of adhesion to the false membrane of croup, and existing in the small intestines at least, if not also in the stomach and colon. 3. Vascular derangements and phenomena which are confined almost entirely, if not exclusively, to the venous system. 4. An exfoliation of the epidermic and venous lining of the intestinal

canal, by which the extremities of the venous system are denuded, and left patulous.

The novelty of some of these positions, especially of the third and fourth, the latter of which assumes the existence of an epidermis in a part not generally admitted, has induced Dr. Horner to give a short exposition of the structure of the mucous coat of the alimentary canal, founded upon personal observation. His account occupies upwards of four closely printed pages, and it is to it, more particularly, that we wish to direct the attention of our readers.

"The mucous coat of the alimentary canal, in a healthy state, and successfully injected, appears to consist almost entirely of a cribriform intertexture of veins; these veins being commonly empty at death, present themselves as a soft spongy structure, which give rise to the ordinary description of its sensible condition as a velvety layer. The most minute injection of the arteries scarcely makes itself visible among these veins when they are properly injected, a straggling branch only here and there exhibiting itself. The arboresence of the arteries is confined to the level beneath the venous intertexture, and is there developed to an extreme degree of minuteness, being intermixed with corresponding venous ramuscles, generally larger and more numerous than the arteries themselves. The fine venous trunks of this deeper layer have their originating extremities bent vertically towards the cavity of the gut, and by that means receive the blood of the first venous intertexture or layer, as the petrous sinuses join the cavernous, or the veins of the penis arise from its spongy structure." p. 60.

The superficial venous intertexture, as it is called by our author, forms, if we understand him correctly, a distinct layer, the meshes of which, being exceedingly minute, vary in a characteristic manner in the stomach, the small intestines, and the colon. This intertexture is said to have a very different arrangement from a common anastomosis, and in some places, as in the colon, to have the appearance of a plate of metal, pierced with innumerable apertures, closely bordering upon each other, and forming the mouths of so many mucous follicles. The edges of these openings are rounded off, and their depth does not extend beyond the superficial venous layer, being bounded below by the deep or arterio-venous layer, and by the subjacent cellular substance. The venous anastomosis here mentioned can be seen only after a successful injection,

and for this purpose we may select either a vein or an artery; the latter being, however, objectionable, as it is necessary that the matter should be pushed into the veins, and whenever this is done we always lose, of course, the benefit which would result from a distinction of color between the two sets of vessels.

If this account is correct, it is obvious that the vessels of the gastro-enteric mucous membrane, are arranged very differently from what they have heretofore been supposed to be, and that there are two distinct sets of veins, the one deep-seated, and accompanying the arteries, the other superficial, and emptying into the former, in the same manner as one sinus of the dura mater does into another. In no organ of the body do we meet with a similar disposition of the veins, excepting in the liver, in which, as is well known, the vena portæ forms a distinct system by itself; whether the learned author really wishes to convey the meaning here expressed, it is by no means easy, owing to the extreme obscurity of his phraseology, to ascertain; if he does, the arrangement which he describes furnishes an anomaly of which no other anatomist before has ever dreamt; but that he really does not, may be gathered from his own statement. "Nothing short of an entirely successful injection will exhibit this venous anastomosis as described; and it may be seen either by injecting a vein or an artery, provided the injection passes from the artery into the veins."

Instead, therefore, of the two venous layers being distinct, as his language would lead us to infer, they are in reality most intimately connected, being directly continuous with each other, so that the superficial lamella may be injected from the deep, or the deep from the superficial. The fact is, that both sets of veins are derived from the same trunks; and the appearance described by Dr. Horner no doubt results merely from a peculiar interlacement of the vessels, not unlike that of the veins of the spermatic cord, or of those of the choroid coat of the eye.

That the gastro-enteric mucous membrane is most liberally

supplied with blood-vessels, is a fact that has long since been familiar to anatomists; but that they present the peculiar arrangement pointed out by the author of the "Anatomical Characters of Cholera," may, I apprehend, be well doubted; at all events, further observations are required before his account can be received as in every respect correct. If we examine a portion of intestine, and carefully trace its vessels as they creep beneath the peritoneal covering, it will be found that, as they approach the sub-mucous cellular texture, they gradually decrease in size as they augment in number, until finally they resolve themselves into a beautiful capillary net-work. These ultimate ramifications, which are divided to an infinite degree of minuteness, being much smaller than the finest hair, are spread over the outer surface of the mucous corion, where they intersect each other in every conceivable direction, thus giving the intestine, when they are injected with size, colored with vermilion, the appearance of a piece of scarlet cloth. This vascular net-work, which may be compared in its arrangement and mode of formation to the vascular circles of the iris, was first demonstrated by Ruysch, so celebrated for the beauty of his anatomical preparations; and subsequently, in 1797, it was very admirably delineated by Bleuland, in his work on the minute structure of the alimentary canal.* The meshes or intervals of this net-work are occupied by numerous follicles and villi, which on being removed, give it the cribriform or seive-like aspect described by Dr. Horner. A very similar arrangement is observable in the pulmonary division of the mucous system, which derives its vessels chiefly from the bronchial arteries. These vessels, accompanying the most minute ramifications of the bronchial tubes, finally inosculate with the capilliaries of the pulmonary artery and veins, and when successfully injected, they impart a deep red tinge to the whole membrane.

The manner in which the capillary arteries of the mucous

*Vasculorem in Intestinorem Tenuium Tunis, etc., Descriptio Iconibus Illustrata. Trajecta ad Rhenum, 1797.

membrane terminate, has always been a subject of deep interest with the anatomist; but it can scarcely be said that our knowledge on this point, even at the present moment, amounts to any thing more than mere conjecture; at least such would seem to be the fact if we place any reliance upon what has been stated by our most distinguished authors. The thin sero-mucous fluid with which they are constantly moistened, induced Haller, and since his time, Sœmmering, Bichat, and others, to infer the existence of arteries with open mouths, or the presence of a set of serous vessels, communicating with the capilliary arteries, and forming what some writers on general anatomy have termed the exhalent system. No such vessels, however, there is reason to believe, exist; and hence the most philosophical explanation that can be offered, in the present state of our knowledge, respecting the termination of the capilliary arteries in question, is that they communicate directly with the capilliary or incipient veins; and in this opinion we are held out not only by the phenomena which are exhibited in examining the gastro-enteric mucous membrane in living animals, but likewise by what takes place in minute artificial injections.

Such, then, being the distribution of the vessels of the mucous system, the arrangement described by Dr. Horner as peculiar to the gastro-enteric division of it, cannot, it seems to us, be admitted; at least not until the researches of other anatomists shall have demonstrated his observations to be correct.

"Ordinary modes of examination give no evidence of the existence in the alimentary canal, from the cardiac orifice of the stomach to near the anus, of an epidermis; on the contrary, they rather lead to a belief of its being absent, in consequence of the softness, tenuity, and transparency of the mucous membrane; but that it is really present, may be proved by the following process:—Tear off the peritoneal coat—invert the part and inflate it to an emphysematous condition; the epidermis will then be raised as a very thin pellicle, and may be dried in that state." p. 61.

The existence of an epidermis or epithelium in the gastro-enteric mucous membrane, has been alternately admitted and

denied by anatomists and physiologists, from the time of Haller until the present moment. The peculiar manner in which the œsophagus is inserted into the stomach, has induced many to believe that the epidermoid lining of that tube terminated at the cardiac extremity of that organ, precisely in the same manner as the corresponding covering of the vagina ends at the lips of the uterus. Haller and Bichat, admitting that it is impossible to demonstrate the epidermis of the alimentary canal, nevertheless maintain that we may infer its existence from the membraniform substances which are occasionally discharged from the bowels. This supposition, however, as has been justly observed by Beclard and J. F. Meckel, may be very easily controverted by the fact that all these excretions are the result of inflammatory action, one of the effects of which is an effusion of sero-albuminous matter, which, after having acquired a certain degree of consistency, is gradually detached from the free surface of the mucous tunic; being finally expelled in the form of a distinct membrane, not unlike that of croup.

Exudations of the kind here alluded to are by no means uncommon, either in the gastro-pulmonary or genito-urinary division of the mucous system. In the larynx, they have been observed by almost every modern author, especially by Cheyne, Home, and Field; in the œsophagus, by Bretonneau, and Albers; in the stomach, by Baillie, Howship, Villerme, Godman, and Andral; in the bladder, by Willis, Ruysch, and Morgagni; and in the uterus, by Hunter, Clark, and Denman. In all these different situations the membranous productions are of an analogous character, differing merely according to the peculiar organ in which they are developed. In every instance on record the formation of the membranous substance has been preceded or accompanied by some degree of inflammatory action. In the cases mentioned by Godman* and Villerme,† as having occurred in the stomach, it was connected with chronic gastritis; in those of Andral,‡ with fever; and

*Philadelphia Journal, 1825.
†Archives Generales, t. xiv., 1827.
‡Clinique Medicale, etc. Paris, 1823.

in that of Howship,* it was the consequence of swallowing hot water.

Taking into consideration, therefore, the fact that the expulsion of these membranes is always preceded or accompanied by inflammation, and the fact also that they are essentially different from the epidermis in their appearance and chemical composition, it is obvious that they cannot be adduced as affording legitimate proof of the existence of an epithelium in the gastro-enteric division of the mucous system. Did this membrane really exist here, it is reasonable to suppose that it could be displayed by the same process that it can in the mouth, œsophagus, or the vagina; but, so far as I know, this has never yet been done, the most delicate dissection, maceration, and boiling having alike failed to accomplish it.

The process recommended by Dr. Horner for displaying this mucous epithilium, is by no means satisfactory, as it would be utterly impossible thus to raise it, even if it existed, from the inner surface of the alimentary canal. Let us suppose, for instance, that the peritoneal coat of the bowel is removed, and that the air finds its way freely into the cellular texture connecting the mucous and muscular tunics, and what will be the result? To raise, as the learned professor imagines, a thin pellicle similar to the mucous epidermis in other situations? Unquestionably not: the only effect which it will have will be to break up the cellular tissue and thus separate the two contiguous lamellæ, elevating them in the form of small transparent vesicles, almost as prominent on one side as on the other. I do not now speak hypothetically, but from personal observation, founded upon a repetition of the experiment suggested by Dr. Horner.

"As this pellicle retains the air, we hence infer that it lines the follicles, and is uninterrupted by any porforations. This epidermis, if the part be previously injected perfectly, shows dots of injecting matter, but no arborescence if it be inflated up from the veins. In so doing the villi disappear, are in fact unfolded." p. 61.

The villi, then, it would seem, according to the notions of our author, owe their shape and consistence solely to this delicate epedermoid pellicle, and not, as we have been heretofore taught to believe, to the proper mucous corion, the very ground-work of the mucous texture. Now, the fact is, Dr. Horner, in speaking of this pellicle, constantly loses sight of this distinction, supposing, no doubt, that although the connecting cellular substance is destroyed by the process of in-

*Practical Remarks on Indigestion, London, 1825.

sufflation, the air only passes between the outer surface of the mucous corion and the contiguous surface of his pretended epidermis. But how, the question may be asked, does the air get there? There are but two ways by which we can account for it; either it must rupture the mucous corion, or it must pass around the muciparous follicles which are embedded in it. The former of these opinions is not at all probable, as, in the event upon which it is predicated, the epidermis itself would be most likely to be ruptured, and thus allow the air to escape; and as to the latter, it assumes what is by no means the case, that the mucous corion is pierced with innumerable apertures,corresponding to the muciparous follicles, and giving it a peculiar seive-like appearance.

On the whole I cannot but think that our author has committed a most serious error—a real anatomical blunder—in this part of his essay, and that he has mistaken for an epidermis nothing more nor less than the mucous corion itself! To show that this belief is not unfounded,let us refer for a moment to the structure of this fundamental portion of the gastro-enteric mucous membrane. Consisting of a soft, spongy substance, it is pervaded by blood-vessels, nerves, and lymphatics, and varies in its thickness in different parts of its extent, though in most places it may be said to be very thin. Presenting no sensible difference in the stomach and the duodenum, it becomes gradually thinner in the jejunum and colon, its tenuity being greatest in the ilium and the rectum. Its tenacity is every where proportionate to its thickness, excepting in the stomach, where it is much stronger than in the rest of the alimentary canal.

The apparent thickness of the corion depends very much upon its muciparous follicles and villi, and upon the cellular tissue which remains attached to it when it is pealed off from the muscular tunic. "Divested of these structures, and examined by itself, it may be described, according to M. Gendrin,* as consisting of an exceedingly thin, delicate pellicle, very vascular and diaphanous, which is stretched over a layer of follicles and papillæ, so as to give them both a complete covering, at the same time that it lines the interior of the former of these bodies. Beneath this pellicle is a stratum of permeable cellular texture, which not only occupies the intervals between the follicles, but at the same time connects the capilliary vessels, which enter into their substance, or which assist in forming the villi. When the follicles become shrivelled, as they sometimes do in protracted chronic diseases, the

*Histoire Anatomique des Inflam., t. i., p. 499.

villi shrink, the cellular texture partially disappears, and the mucous membrane itself becomes singularly attenuated and softened, owing to the fact that it is reduced to what it really is,—a *pellicle* spread over rarefied cellular tissue. Hence, it will be perceived that the thickness of the gastro-enteric mucous membrane, as it appears on first inspection, is altogether apparent, being in reality foreign to it."

"To demonstrate the structure of the gastro-enteric mucous membrane," continues Gendrin, "it is necessary to inflate a portion of intestine, care being taken previously to remove some of its other tunics, to invert it, and tie it at each extremity. In this manner the submucous cellular texture is rendered emphysematous, and the pellicle above alluded to is raised in the form of small but very distinct vesicles. If a small piece be then detached, and placed under a microscope, the pellicle will be seen to be pierced by a multitude of small, rounded apertures."* Is it not a most singular circumstance that Dr. Horner and M. Gendrin, the one writing in 1835, and the other in 1826, nearly ten years apart, should, by pursuing *precisely* the same method of investigation, arrive at such very opposite conclusions, the former considering this "pellicle" as a well-marked epidermis, the latter nothing more or less than the proper mucous corion, the fundamental structure of the mucous tissue? What a difference, reader, between the vision of an American and that of a Frenchman!

The villi, piles, or villosities, as they have been variously denominated, of the gastro-enteric mucous membrane, although seen by Azelli and others, were first accurately described, in 1721, by an anatomist of the name of Helvitius. These little bodies are extremely numerous in the small intestines, especially in the duodonum, but they are by no means wanting, as is asserted by our author, in the stomach and the colon; for in the pyloric half of the former of these organs and in the upper division of the latter, they always exist in considerable abundance. They are best seen by inverting a portion of bowel, and then immersing it in pure water, when they can be made to move gently amidst the fluid, in the form of minute processes projecting from the inner surface of the mucous lining. Their size varies in different parts of the alimentary canal, being much larger in the upper than in the lower portion of its extent. Their length, according to the measurements of Lieberkuhn† and Hildebrandt,‡ is scarcely the fifth

*Op. Cit., p. 500.

†De Fabrica et Act. Villos. Intest. Hom. Lugd. Bat., 1799.

‡Hildebrandt's Handbuch der Anatomie, 4ter Band, p. 275.

of a line; but according to J. F. Meckel,* they are considerably longer, being about the forty-eighth part of an inch, or the fourth of a line: when they are injected or rendered turgid, as they naturally are during digestion, their dimensions become almost double to what they are under other circumstances. They are arranged very compactly, and as there are about four thousand to every square inch, Meckel supposes that the whole number of them may be estimated at more than one million.†

The shape of these little bodies has long been an object of study with the anatomist; but as yet our knowledge in relation to this topic can scarcely be said to amount to any thing satisfactory. Helvitius,‡ Alfred Meckel,‖ Dollinger,§ and Weber,¶ represent them as being flattened; Lieberkuhn** and Sheldon,†† as bulbous; Mascagni‡‡ and Sœmmering,|||| as conical, or of the shape of a mushroom; Hewson,§§ J. F. Meckel,¶¶ Rudolphi, and Hedwig,*** as cylindrical. The observations of Beclard on these little bodies are interesting, and deserving of notice, especially as they are founded on minute personal investigations. To appreciate the value of his remarks it is necessary to state that this anatomist employed an apparatus which was composed of a glass sphere, of small diameter, open on one-fourth of its surface, and of an operculum a little smaller than the opening, and of a thin layer of wax. The part to be examined was fixed on the wax with small pins, after which it was immersed in water, with the open sphere, which was then filled with that fluid, and placed on the operculum. The apparatus was then withdrawn, and the object to be examined was thus covered by a small lenticular mass of water, which augmented its diameter.

Examined in this way, Beclard asserts that the villi appear neither conical, nor cylindrical, neither tubular nor saccular, but in the shape of leaflets or minute plates, so closely aggre-

*Manual of Anatomy, vol. iii. p. 266.
†Op. cit. vol. iii., p. 266.
‡Mem. de l'Academie des Sciences, Paris, 1721, p. 202.
‖Archive fur die Physiologie B. v., p. 163.
§Briefe an Sœmmering, 1828, p. 15.
¶Notes to Hildebrandt's Anatomie, vol. iv., p. 276.
**Op. cit.
††History of the Absorbent System, p. 36.
‡‡Vasorum Lymphaticorum, Corsheim, 1787.
||||Bau des Menschlichen Korpers, B. iii.
§§Experimental Inquiries, part ii., p. 175.
¶¶Manual of Anatomy, vol. 3, p. 266.
***Grundriss der Physiologie, B. ii. p. 209.
†††Disquisitio Ampullulorum, etc., Lipsic, 1789.

gated or set together as to convey the appearance of a luxuriantly tufted pile. Their shape varies according to the manner in which they are examined, and according to the region in which they are situated. Those of the pyloric half of the stomach and of the duodenum, are broader than they are long, and form little delicate plates; those of the jejunum, are long and narrow, constituting true piles or villosities; at the end of the ilium, they are laminar; and in the colon, they can scarcely be distinguished.*

These statements, it will be perceived, are extremely discordant, and they can only be reconciled, it seems to us, on the assumption that these little bodies vary not only in different animals, but also in different parts of the same animal. Thus, Hedwig states that they are cylindrical in the horse; conical in the dog; pyramidal in the mouse; and club-shaped in the pheasant; and it is not at all improbable, we think, that some of the anatomists whose names have been mentioned, made their observations on some of these animals; thus giving rise to the remarkable discrepancy by which they are characterized.

In regard to the intimate structure of the villi scarcely less discrepency prevails amongst authors than there does in relation to their shape. According to Lieberkuhn, each of these little bodies receives several minute arteries and veins, a lacteal vessel, and a nerve; the whole of them being united together by a very delicate cellular substance. The lacteal vessel he supposes to be dilated into a little vesicle or pouch, of the shape of an egg, the capacity of which he estimates at the fifth of a cubic line. The interior of the vesicle is soft and spongy, and upon its walls are ramified the arterial branches, the blood of which is taken up by corresponding veins, which finally terminate in a single trunk. On the apex of each villus is a small orifice, which he believed to be the mouth of the lacteal vessel.

Cruikshank, Hewson, and W. Hunter, on the contrary, deny the saccular expansion of the villi, and infer that the lacteals are ramified in the same manner as the blood-vessels. They assert, moreover, that, instead of containing but one orifice, as represented by Lieberkuhn, each pile presents as many as fifteen or twenty. These observations, again, are contradicted by the researches of Rudolphi, A. Meckel, and Treviranus. The former of these distinguished physiologists, who examined the villi in man and in a considerable number of animals, declares that he has never been able to perceive the orifice described by Lieberkuhn, much less those mentioned by Cruikshank, Hewson, and Hunter, notwithstanding the great care which he took to demonstrate them. The result of these investigations corresponds very accurately with the microscopical observations of Beclard. He describes the villi as being semi-transparent, smooth on the surface, and destitute alike of an ori-

*General Anatomy, p. 195.

fice and a saccular enlargement. Denying the existence of the vascular texture recognized by most other writers, he asserts that the only thing that can be seen in the gelatiniform substance, of which he supposes them to be composed, is a series of globules, of extreme delicacy, and arranged in linear order. The base of each villosity, however, he represents as being encircled by a net-work of blood-vessels and lymphatics, of great tenuity.*

The vascularity of the villi is extremely great, and may be beautifully displayed by forcing fine injecting matter or quicksilver into the vena portæ. If this be successfully effected, they will present, in the one case, a deep red, and in the other, a white argentine appearance. Under these circumstances they are rendered turgid, and greatly augmented in bulk. The same thing takes place, as has been already stated, during digestion, when they become gorged with chyle. If they be exposed to the air, in a living animal, and examined with a powerful microscope, they are observed speedily to assume a rose-colored aspect, and to present a vast number of the most delicate pores, from which are constantly oozing minute drops of a thin transparent liquid, which assists in moistening the inner surface of the mucous tunic. This fluid is very different from the viscid, ropy matter which fills the intervals between the villi, and which is discharged from the muciparous follicles. May not the presence of this serous fluid in the intestinal canal, and the rapidity with which it may be secreted, enable us to account for the profuse watery discharges which occur in Asiatic cholera, and in some species of chronic diarrhœa? M. Gendrin is inclined to think that the intestinal villi are not only endowed with the power of sucking in chyle—which is evidently their chief function—but that they are also organs of exhalation and venous absorption. He considers them, indeed, as so many capillary prolongations, enveloped in a fold of the cellulo-vascular pellicle lining the interior of the intestinal tube.† This opinion in regard to the structure of these bodies appears to me to be extremely plausible, certainly more so than any other with which I am acquainted.

"The superficial venous layer has great regularity in the ileum, and the conical villi stand out beautifully from its partitions, or, in equivalent language, from the divisions of the follicles. In the upper part of the small intestine the follicles are in equal number to what they are in the ileum; the regularity of their arrangement being interrupted by the long serpentine and oval villi; but invariably the same venous intertexture exists and forms in both, the chief bulk of the villi by passing into them.

In the stomach the *follicles* vary much in size, and there is an arrangement whereby many smaller ones are seen to open into the larger; on an average about two hundred and twenty-five are found upon every eighth of an inch square, which would give of course to an inch square sixty-four times that amount, or fourteen thousand four hundred follicles, and conceding the whole stomach to present an area of ninety inches, which is probably below the mark when this organ is moderately distended, as exhibited in the preparation upon which this calculation is founded, the entire number of follicles is *one million two hundred and ninety-six thousand.*

The greater uniformity of size of these follicles in the colon, and its even surface, enable us to count them with more certainty, and they appear to exist at the beginning of this gut at the rate of about four hundred for every eighth of an inch

*General Anatomy, p. 192.

†Histoire Anatomique des Inf., t. 1, p. 507.

square, and in the sigmoid flexure at about two hundred to the same area; they become, in fact, both smaller and less numerous in descending towards the anus. Admitting the entire area of the colon to be five hundred inches, and nineteen thousand two hundred of these follicles, on an average, to exist on every inch square, the aggregate number will be *nine millions six hundred thousand.*

Again, estimating the whole area of the mucous coat of the small intestines at fourteen hundred and forty inches, and allowing for interruptions occasioned by villi, about twenty-five thousand follicles are found upon every square inch, and the two numbers multiplied, produce *thirty-six millions.*

The entire number of follicles in the whole alimentary canal is, by the preceding estimates, forty-six millions, eight hundred and ninety-six thousand. I am very far from pretending to have counted them all, but have made an approximation to the actual number by observing sections of different portions of the same subject, and verifying the observations upon other subjects. The external surface of the cutis vera presents, as it were, in outline the same arrangement; the venous reticular intertexture appearing broader, not quite so perfect, and more shallow, and forming the papillæ; but as additional experiments are wanting it, may be passed over with this transient notice; perhaps, indeed, a more skilful hand in adopting the hint may perfect the details.

In the stomach, the largest of these follicles is about 1-98th of an inch in diameter, and the smallest about 1-490th. In the colon the largest is about 1-245th of an inch in diameter, and the smallest about 1-490th. In the small intestines their size varies in about the same ratio as in the colon, but they are much more irregular in shape, being scattered more in groups in consequence of the villi intervening; some of them penetrate obliquely towards the foundations of the villi, hence when examined from the exterior, their distribution is more regular, and they are seen lodged in the cellular coat of the gut.

I have endeavored to keep the estimate of the number of follicles below what other calculators would make it upon an observation of my preparations, and a fair measurement of the area of the alimentary canal, lest the number may seem excessive and incredible; I have therefore the most reasonable assurance of being within bounds on that point. I may now ask their use; is it to secrete or absorb? If they are simply secernents of mucous, the number, one would think, much greater than so limited a secretion requires—moreover, why is it that they become smaller and less numerous towards the lower end of the large intestine, where greater lubrication is required for hardened fæces; in addition, are not the glands of Brunner, [solitariæ,] and of Peyer, [agminatæ,] amply sufficient to furnish the required mucus? Again, after most sedulous observations upon the villi of all kinds, finely erected by my injections, and placed under most accurate, simple, and compound microscopes, I find invariably a polished reflecting surface, uninterrupted by foramina, either at their ends or sides, while many of these follicles are found passing obliquely into their bases. An excellent Woollaston's doublet, which makes the villi of the ileum appear an inch long, exhibits them with a polished translucent surface, without foramina, except where a villus from accident has been broken, a contingency readily recognized by one in the habit of viewing them. Finally, if the lacteal foramina of Lieberkuhn and others, do exist in fact, why is it that the raising of the intestinal epidermis by inflammation does not exhibit these foramina by the air escaping through them, but on the contrary, admits of a dried preparation in that state, the villi being completely effaced.

Taking into consideration these several objections to the theory of the follicles being secreting orifices, it appears to me that a better idea of their use is called for, which suggestion is submitted to the profession, with the hope that a more capable person will remove the difficulty by additional confirmation of preceding theories, or by the invention of a new one; for my own part I am much inclined to adopt the opinion of their absorbing faculties. It is generally conceded that the erection and prehension of the Fallopian tube is produced by a vascular turgescence, in which the veins, from their number, must execute an important part; in like manner as these follicles are formed in the midst of veins, their orifices only become erect and patulous by the distention of these veins, and cannot be seen, especially in the small intestines, unless an injection has succeeded fully; but the erec-

tion of these veins during digestion puts the follicles in a similar condition; there is therefore some ground of inference, that the act of the Fallopian tube in conveying a germ, and of a follicle in conveying into the thickness of an intestine congenial matter, may be analogous." pp. 61–4.

I have extracted this account of the size and number of the mucous follicles entire, as it forms decidedly the most interesting and valuable part of the professor's paper; in fact, the only part worthy of his pen. If his estimate be correct, it follows that these little bodies are infinitely larger and more numerous than has been heretofore imagined; but as all microscopical observations are liable to great deception, and, more especially, as the whole of these follicles can never be distinctly seen under any circumstances, so as to enable us to count them, it is not at all improbable that the author has fallen into error, and that his evaluation greatly transcends the natural limits. We leave it, however, for what it is worth, rather preferring to let the reader draw his own inferences than to forestall his opinion by any thing we might say of our own.

In the healthy state the mucous follicles are always recognized with great difficulty; but in certain pathological conditions, especially in chronic diarrhœa, cholera, and dropsy, they are rendered very evident. Being situated in the sub-mucous cellular substance, they are covered over by the proper mucous corion, and are of an irregularly oval, rounded or spheroidal shape, presenting each a small orifice leading to a blind or shut cavity. They occur either separately, or are arranged into groups, but in general they are so much flattened that they do not project sensibly upon the free surface of the membrane. In children these bodies are naturally more developed than in adults, and consequently are more easily recognized. In order to see them distinctly, the mucous lining must be thoroughly cleansed, and then held between the eye and a strong light, when they will appear like minute dots or points, of a white or greyish color, and with a central aperture, the periphery of which is of a deep grey: the difficulty of seeing these little bodies will always be lessened if the part to be examined be previously steeped in warm water or vinegar, as was first recommended by Willis, and since by Lauret and Laissagne. Their structure, as far as it can be ascertained, seems to be very simple, being composed entirely of a congeries of vessels, connected together by the most delicate cellular substance. Their interior cavity is perfectly smooth and uniform, and bedewed with a thin mucous fluid, which is seen constantly oozing from it.

With regard to the supposition of our author, that these little bodies possess absorbing powers, it is scarcely necessary to remark that it is altogether hypothetical and unfounded. The philosophy of this supposition is beautifully exhibited in the passage where he asks the question, whether the glands of Brunner and of Peyer are not amply sufficient to furnish the mucous which is required for lubricating the alimentary canal. The learned professor would thus evidently have us believe that these glands are essentially different from follicles, or if, as they really are, identical in structure, that they perform a different function!

We have now finished what we have to say in relation to our author's exposition of the mucous coat of the alimentary canal, founded on his own profound "personal observation," and shall conclude this article by one or two extracts, in which are detailed some of the more prominent lesions of the gastro-enteric mucous membrane resulting from Asiatic cholera.

"The mucous coat of the stomach and small intestines had a strong inflammatory tinge; the latter were filled with sero-fibrinous fluid, and were lined in almost their whole length by a layer of fibrine; this layer was about half an inch in thickness, and adhered to the mucous coat as a layer of fresh fibrine does to the pleura or peritoneum; that is to say, with a degree of tenacity permitting it to be rubbed off with the finger or floated in water, so as to exhibit both its adhesion to the intestine and its distinction from it. Having taken a piece of intestine home and hardened it in alcohol, the layer of fibrine was made manifest beyond controversy, and required to be separated with the end of a scalpel, exhibiting in that way its course uninterruptedly over the valvulæ conniventes, and down in the depressions between them. The difference marked in the thickness of this membrane was, that it began as a film in the duodenum and increased insensibly to half a line at the lower end of the ileum. At the suggestion of Dr. Physick I took a piece of the intestine, which had been preserved in alcohol, and after a maceration of a week, in a room the temperature of which was 70 degrees of Fahrenheit, the membranous character of the lining was still preserved." p. 68.

"In this case I made a minute injection of the pyloric end of the stomach, of some sections of the jejunum, and of the beginning of the colon and adjoining part of the ileum. The injection penetrated both arteries and veins with an almost inconceivable minuteness. In regard to the veins, when the parts were dried they opened on the internal surface of the bowels and stomach, as if excoriation had left their orifices bare. Hundreds also of cholera vesicles were found on the mucous coat of the jejunum jutting out from its surface in a spherical form so distinct as to leave no doubt of their being neither tumefied villi, follicles nor glands; they were especially numerous along the bases of the valvulæ conniventes. The superficial venous layer of the colon was entirely detached, except in a few places, and there it seemed like the skin of a locust just ready to fall off, it being so loose that the injecting matter had not passed into it. It there presented the cribiform appearance, being actually perforated from side to side by the sloughing process. No vesicles were found in the colon, and probably for the reason that they had been removed by the sloughing of its cuticle, and superficial venous layer; neither were vesicles found in the stomach, and probably for the same reason." p. 75.

The reader will perceive that in the latter of these cases, the "superficial venous layer was entirely detached, excepting in a few places, and there it seemed like the skin of a locust ready to drop off, it being so loose that the injecting matter would not pass into it;" and that, in the former, the small intestines were lined, in almost their whole length, by a layer of fibrin, no less than half a line thick, and firmly adherent to the mucous coat. These facts are interesting, but they are far from proving the existence of an epidermis in the gastro-entiric mucous membrane. All that they prove is, that, in Asiatic cholera, there is a high degree of inflammatory action going on, followed occasionally by a partial sloughing of the mucous corion, and the formation of a false membrane, similar in its texture to that of croup. As to the vesicles which Horner describes as occurring sometimes in the stomach and bowels in this disease, it is by no means easy to account for their origin, unless we suppose that, in consequence of the violence of the inflammation, the mucous membrane becomes detached, and raised from the muscular tunic by air or gas being generated between them.

Dr. Horner has promised to continue this subject in the next number of the "American Journal;" and as we deem his remarks extremely valuable, we anxiously wait for the appearance of his paper. By the way, the present number of this journal embraces an unusual amount of pathological matter, and we would especially refer to the "reports" of Doctors Kirkbride, Gerhard, and Pennock, as containing much valuable information. S. D. G.

ANALECTIC, ANALYTICAL, AND ORIGINAL.

I. Analectic.

Ad Sylvas Nuncius.

1. *Theorectical and Practical Treatise on Wounds inflicted by the Arms of War.** By M. Dupuytren.—Few surgeons have been so successful in their professional career as M. Dupuytren, and none have acquired a more brilliant reputation. Possessed of excellent judgment, a retentive memory, and great zeal and enthusiasm in his professional pursuits, he added to these qualities, a remarkable penetration, a quickness of perception seldom witnessed, and which admirably fitted him for the investigation of diseases. And for this purpose, no one perhaps ever enjoyed greater opportunities. Entrusted with the charge of one of the most extensive hospitals in Europe; enjoying moreover a large share of private practice,—he could not fail to be familiar with the nature, and various forms of disease;—and it was particularly at the bedside of the patient, that his superiority in diagnosis, and excellence as a practitioner, were strikingly manifest.

Among the different classes of disease or injury, which the surgeon is called upon to treat, there is one, the entire knowledge of which cannot be obtained in time of peace, neither in the quiet walks of the hospital, nor in the gradual course of private practice, but must be sought among the horrors of war, and scenes of death and bloodshed. It seldom falls to the lot of surgeons at home, to have opportunities of witnessing the effects produced by arms of war. The war, however, of 1814–'15, and the celebrated revolution of July, 1830, afforded to M. Dupuytren these advantages;—the wounded were received into the hotel dieu, and placed under his guidance and direction. It was from the observation of these numerous cases of injury, that the principles contained in the work before us were derived; and to those, in fact, it owes it origin. It is indeed a series of lectures delivered by M. Dupuytren, at the request of several

*Traite Theorique et Pratique des blessures par Armes de Guerre, redige d'apres les lecons cliniques de M. Le Baron Dupuytren, Chirurgien en chef de l'Hotel Dieu, et publie sous sa direction par M. M. less Docteurs A. Paillard et Marx, 2 tome, pp. 522 and 527, Paris, 1834.

As this work has not reached us we avail ourselves of a notice of its contents as given by one of our respected cotemporaries.—Ed. West. Jour.

physicians and surgeons, as well as students and strangers. The work itself consists of two volumes, the first of which is taken up with the consideration of wounds in general, without reference to the particular part or region in which they may be inflicted. It is divided into twelve chapters. The 1st is devoted to a description of the different weapons or arms of war, which are in modern use, and contains much that is curious and interesting, particularly to the military surgeon. We shall omit this, however, and pass to the consideration of the effects produced by these agents—subjects with which we are more particularly concerned.

The effects produced by arms of war are exceedingly various, and must depend, of course, upon the nature of the weapon, the force with which the injury may be inflicted, and the nature of the organ or part concerned.

As almost every thing has been applied to the purposes of war, and may be used as a weapon, offensive or defensive, the appearance and the nature of wounds, produced by these agents vary exceedingly; some inflicting injury, by division of the tissues or by hemorrhage; others by violently bruising or tearing the parts, etc. Hence, M. Dupuytren has made a division of wounds into—"1st, punctured—2d, incised—3d, wounds by puncture and division—4th, contused wounds—5th, wounds by commotion—6th, wounds by crushing of parts, (*ecrasement*)—7th, lacerated wounds—8th, wounds par arrachement—9th, wounds by attrition, i. e. such as are caused by bodies propelled by the force of air or steam—10th, wounds produced by small fire-arms, as guns, pistols, etc.—11th, wounds produced by cannon balls, etc.—12th, wounds produced by gunpowder.

In wounds produced *par arrachement*, there is laceration produced simply by excessive extension: or this may be united with torsion. The cases of limbs torn off by machinery will illustrate this. We have used the word in this place, as its meaning could not be fully expressed by another in English. Under the head of punctured wounds, M. Dupuytren alludes to the effect produced by round and pointed instruments, as bodkins, spindles, etc. The form of the wound inflicted by these instruments seems not to have attracted attention, although, from its singularity and difference of character from that which has generally been supposed, it is worthy the attention of the medical jurist. From several observations made upon the living and the dead subject, M. Dupuytren has ascertained, that wounds made by these instruments are similar, in almost every respect, to those inflicted by cutting weapons. The borders of the wound are even and nearly in apposition, and if they are separated, slight tension of the skin will effect their union;—punctures of this nature always have the same direction in the same region. In the neck, and on the anterior part of the axilla, the direction of the puncture is from above, downward. On the thorax, they are parallel to the direction of the ribs, or the intercostal spaces. On the anterior part of the abdomen, they are oblique from above downwards, and seem to assume the direction of the muscular fibre. In the middle of this region they are vertical, while on the members they are parallel to the axis of the limb. These facts appear to show, clearly, the different direction of the fibres of the skin in the different regions, and the instrument seems to act merely by separating them.

Case.—"Charles Levauvre, aged, 33, strong constitution and sanguine temperament, attempted suicide by stabbing himself three

times in the region of the heart with a pointed bodkin. When taken to the hotel dieu, three small wounds of two lines in length were observed opposite the 7th rib. The lips of the wound were equal and very near each other, and the angles of it very acute. They were parallel with the rib, and resembled those made with a penknife. The weapon was procured and several punctures made on the dead subject, which presented the same appearance.

In wounds of the hollow organs, the injury produced, varies greatly, according to the state of emptiness or distension, and our conduct must vary accordingly. Should the weapon which has inflicted the injury be still retained in the wound, (suppose it were the bladder,) the urine should first be drawn off by the catheter, before the weapon is removed, otherwise the sudden withdrawing of the instrument might suffer the urine to escape into the cavity of the abdomen, and produce the most intense inflammation and even death. Should it be in the heart, it would be necessary, in the first place, to diminish the quantity of circulating fluid by v.s. Many cases are on record, of wounds of this organ, in which the patient recovered. Its structure, indeed, is well adapted to secure it against the usual consequence of puncture of the hollow organ,—the loss of blood being prevented by the oblique arrangement of its fibres, as well as their contraction, which is sure to ensue.

In speaking of wounds of the articulations, after enjoining the usual rigorous antiphlogistic treatment, M. Dupuytren recommends the application of a blister around and upon the wound itself; and speaks of this treatment as peculiar to Fleury De Clermont. It may be new in France, but the practice is familiar enough in this country, and was we believe, first recommended by Dr. Physic.

Foreign bodies although, for the most part exciting inflammation in the organs in which they are lodged, do, it is well known, often remain in the system for years, without producing any or very serious inconvenience. This is the case with some even, which are very sharp and pointed; and of this M. Dupuytren relates a curious instance: "An officer, with a view to commit suicide, inserted in the region of the heart, one of the long black pins, known by name of *epingle a friser*. This pin penetrated the pericardium and heart, and remained in this viscus during life time. After death the pin was found, the officer having died of another disease."

M. Dupuytren has often had occasion to observe the condition in which foreign bodies exist in the different parts of the body. "Whenever they excite inflammation and suppuration, they are enveloped by a purulent cyst of the nature of mucous membrane, and, at the end of a certain time, a fistulous communication is formed between them and some point of the surface or interior of the body. On the contrary, when they excite neither inflammation nor suppuration, we find them surrounded by a cyst, the form of which corresponds to their own, but whose organization is similar to those of the serous membranes. In their cavity is constantly observed a limpid serosity, analogous to that which lubricates the serous membranes. This remark is not only curious, but important, with regard to practice. If, indeed, in extracting these foreign bodies, we remove them only after making a simple incision of the cyst, and then close the wound, in order to obtain union by the first intention, we find almost always a new tumor produced, by the quantity of serum developed in the sac. It is necessary then, when extracting balls to remove the cyst

which surrounds them, or to fill it with charpie, in order to excite inflammation, and obtain adhesion.

But although foreign bodies sometimes remain at rest in the tissues, and give rise to little or no irritation, it is well known that they often travel an immense space of the surface, and even penetrate deeply the interior of the viscera. Particularly does this apply to sharp and pointed substances, as pins, needles, etc. If they traverse the body rapidly, they leave no trace of their passage through the organs. On the contrary, if their passage is slow, they are surrounded by an adventitious serous membrane. In general, they have a tendency from the interior to the external surface. Sometimes, however, this is reversed; but even then there is a strong determination to the interior of the intestinal canal, which in fact may be considered as a continuation of the external surface. It is an interesting fact, remarked by M. Dupuytren, that substances traversing the serous membranes never fall into the interior of these sacs, whereas they frequently, after piercing the serous tissue, penetrate into the mucous cavities. Thus pins which have been swallowed, have been known to pierce the bladder, and being there retained, give rise to the symptoms of stone, and actual formation of a calculus. Of this M. Dupuytren cites an instance. The above cases show a most beautiful provision of nature. We see these substances almost by instinct, as it were, shunning the serous cavities, where they could not fail to excite inflammation, and all its pernicious consequences, and tending towards the mucous surfaces, which either readily allow their elimination, or at least support their presence with less irritation. There is a singular and almost incredible propensity among some females, to swallow pins, needles, and other sharp and pointed bodies. M. Dupuytren has remarked several cases of this kind in the hotel dieu, and among others, that of a female, who swallowed an enormous quantity of pins and needles, and was reduced by the suffering and pain occasioned by their progress through the skin to a great degree of emaciation. He has opened more than a hundred abscesses, on the body of this female, in which there were always one or two needles or pins. Hardly any movement could be made, without experiencing the greatest suffering. The patient finally died, and on opening the body, many hundreds of pins and needles were found scattered through all the different parts of the body.

We shall pass over the chapters devoted to the consideration of incised wounds, as they do not present any thing of peculiar interest, with the exception, perhaps, of a few pages on wounds, with complete separation of parts. These injuries, when produced by instruments which tear, bruise, or disorganize the structures to any considerable extent, are incapable of reunion; neither can this be expected, when the member is of considerable size. Here the part is too depending on the general system, to retain its vitality sufficiently long, and even were it united to it, as it could only be restored by the action of the capillaries, the extent of this vital action would be too limited, and the part which was separated must die before sufficient circulation and innervation could be established. It is, therefore, only in parts which are small and have been recently separated from the body, that union can be effected. The more speedily this is attempted after the injury, the greater chance is there of success; but it is probable that it may be accomplised at any time, so long as the heat of the part remains, and the blood continues fluid,

thus manifesting the existence of the vital properties. Thus M. Dupuytren relates the case of a physician who, in extracting a tooth from a child, by mistake drew out one of the permanent teeth. Discovering this, he endeavored to find the tooth. It had fallen on the floor, and more than an hour elapsed before it was found. By the advice of M. Dupuytren, it was again replaced; the tooth lived, and, at the end of eighteen months, was as firm and useful as the others. Similar facts have not unfrequently been observed. In this case, the vitality of the part remained, probably, much longer than usual. It is well known that parts, which are naturally at great distances from each other, may sometimes be united, as the *Talicotian* operation fully exemplifies. Accidental defects of one individual may sometimes be supplied by another. There have not been wanting individuals kind enough to supply their neighbors with integuments sufficient to repair their noses, when destroyed by accident or disease. The experiments of Hunter are familiar to most readers, and we have seen the spur of a cock which had been transplanted to his head, and had attained the length of two or three inches. M. Paillard and Marx, alluded to some very interesting experiments of this kind performed by M. Baronia.

Wounds made by Incision and Puncture.—The character of these wounds may easily be inferred from that of the instruments by which they are inflicted, which having a sharp point, are well calculated for plunging profoundly into the different parts of the body, while by their cutting edge they divide the tissues to a considerable extent. From this it results that there is more hemorrhage; the nerves are more frequently divided, and from the division of the muscles, hernia is more apt to ensue, than in cases of punctured wounds. Sometimes, however, it happens, that the viscera, particularly those of the abdomen, some of which are smooth, loose, and yielding, evade the weapon which pierces this cavity. M. Dupuytren relates an interesting case: "M. N. under the influence of domestic affliction, resolved to destroy himself. To accomplish this, he placed the handle of his sword against the wall of his chamber, and precipitated himself against its point. It passed entirely through the abdomen;—M. Dupuytren was called, and found him seated on a chair; the point of the sword eight or ten inches from the back, and upon the right side of the vertebral column. The patient appeared to suffer very little; there was no sign of effusion of blood or any other fluid into the abdomen cavity, nor of any lesion of the viscera. M. Dupuytren extracted the weapon, not, however, without some difficulty, and a fear that hemorrhage, which had been prevented by the presence of the sword, might occur as soon as it was withdrawn. There was none however; and the patient, after three or four bleedings and a few days of repose, was entirely cured."

Upon this part we shall not dwell, but pass to the consideration of a state of the system which is often found to accompany gun shot wounds; and as its consideration is of great importance, and has been somewhat neglected by authors, we shall speak of it somewhat in detail. This affection is generally the consequence of a severe attrition or contusion of some part, and is called stupor, (*stupeur.*) When this state exists, the sensibility at the seat of injury is greatly diminished; so much so, that it can frequently be amputated without the consciousness of the patient, who is indifferent to all that is taking place about him. In these cases, the heat of the body is

greatly reduced, and the limbs are sometimes of icy coldness. A deadly shock has been inflicted on the system, and all the organs are struck with torpor. The heart acts feebly and irregularly, the breathing is slow, the eyes are fixed, the mouth open, and the countenance has an air of astonishment. While this state exists, the wounds do not bleed, but, on the contrary, present a pale or violet color, and are soft and flabby. After a few days, the parts on which the patient reposes, as the great trochanter, sacrum, etc., often ulcerate. If re-action comes on, the wounds become inflamed, and furnish an exhalation from their surface, violet, sanguinolent, or fetid, and the symptoms of stupor disappear, an emphysematous swelling takes place, and extends to the trunk. The fever which ensues is extremely irregular, and is composed of alternate chills and flushes of heat: fierce delirium, vomiting, and jaundice often ensue, together with suppression of urine. Generally, when it has arrived at this state, the patient soon expires. It would appear that, in these cases, there is such an exhaustion and disturbance of nervous energy, that the parts are rendered permanently incapable of resuming their office; hence, the irregularity of the phenomena which ensue. That the vitality of the parts is in a measure destroyed, would seem, moreover, to be manifest from the changes which ensue after death. Thus the body, and in particular that part which has been injured, has been observed to putrify with great rapidity, and decomposition, was far advanced when it had only commenced in the bodies of those who had died of ordinary diseases.

In every case of stupor, where the schock has not too profoundly prostrated the powers of life, we can distinguish two stages: 1st, one of depression which gradually passes into the second, or that of re-action. In the first, we should endeavor to support the powers of life as much as possible by the administration of stimulants and cordials, varying them, however, according to the particular circumstances of the case. In some instances, where the stupor is slight, we should be particularly cautious in giving stimulants, as in many, when the re-action is developed, have cause to regret their too liberal administration. The wound should be first fomented with wine, spirits, or aromatic liquors. In fact, all prudent endeavors should be made to excite the system, and relieve it from the great exhaustion and debility under which it labors; and when re-action has taken place, it is necessary carefully to watch the symptoms as they rise; and our treatment must vary with them. Should much inflammation supervene, it must be subdued by the usual antiphlogistic means; but our bleedings should rather be small, and frequently repeated. If nervous symptoms ensue, antispasmodics are indicated. It is necessary, of course, to remove the patient as much as possible from the pernicious influence of moral causes. M. Dupuytren adds, that those who have suffered from stupor, are more exposed than others to the dangers of the ataxic affections.

Wounds by Air and Steam Guns.—These are seldom employed in war—as they possess many inconveniences, and their force of projection is not so great as that of gundowder. The air gun, however, is sometimes used as an instrument of murder, where it is desired to avoid detection. This is rendered difficult, by the absence of light and noise on the occurrence of the discharge; and for this reason they have been prohibited in certain countries. Where a wound has been maliciously and secretly inflicted by one of these instruments, it

may be desirable to know, if any criteria exist by which it may be distinguished from one produced by fire arms. The wounds of the latter are often soiled and blackened by the product of the decomposition of the powder, especially the charcoal. This, moreover, is often perceived on the clothes of the wounded, and it may be accompanied by the presence of the wadding. The form and nature of the wound is the same, but there is generally less attrition in wounds from the air gun, owing to its propelling force being weak, than in those produced by gunpowder.

Wounds produced by Gunpowder.—The effect produced by balls or other hard substances when set in motion by the explosive force of gunpowder, is familiar to all. That the common wadding of a gun may produce very dangerous and even fatal effects, is however not so generally known. As the knowledge of this fact may be useful, and, as it has a practical bearing on medical jurisprudence, we shall mention two interesting cases related by M. Dupuytren: "Some years ago, a person, armed with a gun, while quarrelling with another man, fired upon him. The distance was short, and a wound was inflicted upon the abdomen;—this cavity was penetrated, and the small intestine wounded. As the patient died,—the case became the subject of judicial investigation. M. Dupuytren was called upon to declare the cause of death. The prisoner insisted that the gun was simply charged with powder, and that his intention was only to frighten, and not to kill his adversary. His statement was true; on examination after death, no ball was found in the wound.

As much depends upon the swiftness and force of propulsion as upon the density of the moving body. Thus M. Paillard and Marx have determined, by experiment, that a ball of soft, chewed, and wet paper, is able to perforate a plank of considerable thickness: the same thing was observed of balls of wax, dough of bread, and the end of a candle;—grains of powder, loose in the barrel of a gun, may be driven into the body to a considerable distance. We shall adduce one more instances of death by the wadding of a gun: "During the celebration of July, 1830, a merchant's clerk armed himself with a gun loaded merely with powder and wad. He discharged it about the distance of six feet upon a boy, with the intention merely of frightening him, without suspecting the occurrence of any accident; his error however was soon perceived; and the boy seriously wounded, was brought to the hotel dieu. There was a wound, the size of a five franc piece, upon the right flank, on a level with the crest of the ileum, five or six lines behind the anterior superior spinous process; the skin and superficial part of the muscles were taken away, as with a punch (emporte piece;) the bottom of the wound presented a black and bruised appearance. The iliac crest was uncovered to the extent of half an inch. There was some stupor, and very little hemorrhage. Under the influence of appropriate dressings and general treatment, the eschar separated, and the peritoneum was seen naked. Nevertheless every thing seemed to promise a favorable termination, when the patient having indulged too much in eating, the supperation was suppressed, the wound inflamed, aud chills and fever supervening; he died on the fifteenth day. On dissection, the peritoneum was observed to form a tumor, of the size and form of an egg, at the bottom of the wound—the illiac crest to the extent of an inch was denuded, abscesses formed around the wound, and the periosteum of the illiac fossa was detach-

ed, and elevated by pus. The peritosteum of this region was the seat of intense inflammation—the pleura of the right side was inflamed, covered by false membranes, and its cavity filled by seropurulent fluid. The right lung presented on its surface, and in its substance, a number of small abscesses—some were observed in the inferior lobe of the left lung; the other viscera were sound.

Under the head of physical effects of projectiles, M. Dupuytren gives us much that is curious and interesting. Our limits will not, however, permit us to give much upon the subject. In the effects of balls upon bone, it has not unfrequently been observed, that the bone has been perforated, or that the foreign body may have remained in its substance, without giving rise to fracture. Particularly is this the case in young subjects, where the bones are as yet somewhat soft and yielding. M. Dupuytren relates several cases of this kind, and several have been observed by M. Paillard and Marx: "Kinderman, aged twenty-five, soldier of the imperial guard, was wounded by a ball, which traversed the tibia in its superior third. After suppuration was established, several dead portions of bone were extracted—a probe could be passed entirely through the limb; there was no fracture; and the patient perfectly recovered." A case occured to M. Larrey, in which the arm was amputated at the shoulder joint, for a wound of this part inflicted by a ball; on dissection of the limb, it was discovered that the ball had passed through the head of the humerus without producing any fracture.

The modification which balls experience in their course when striking upon water, has often been observed. If the angle of incidence is very great, that of reflection must correspond to it, and accordingly we have a series of skipping or bounding of the ball, on the surface of the water. If the angle is not so great, it may be reflected to a considerable distance; and balls which have been fired upon the water from one bank, have struck persons on the opposite side. We here cite a case which will illustrate this position, and may teach us the necessity of caution in similar circumstances:—"Two boys were firing at fish, upon opposite sides of the river, their guns being loaded with shot. One of them perceiving a fish, fired at it—at the same moment his friend, placed on the other side of the river was struck in the eye by a shot. A small wound was perceived on the inferior eyelid, and an opening upon the globe of the eye, near the union of the transparent cornea with the sclerotic. The sight of the eye was lost—violent inflammation took place, and only terminated by the bursting of the organ and evacuation of the humors."

Several pages are dedicated to the treatment of wounds inflicted by fire-arms, and many interesting cases are detailed. Inasmuch as the treatment does not present any thing peculiar, (with the exception, perhaps, of using incisions, to anticipate the occurrence of strangulation of the part, much oftener than is practised by most English and American surgeons,) and our limits do not permit us to make extracts from the cases, we shall refer the reader to the work itself, and pass to the consideration of amputation—the concluding subject of the first volume.

This is one of the most important topics which can engage the attention of the surgeon, and the preservation of the life of the patient, often depends not only upon his correct, but *prompt* decision. This is particularly the case upon the battle field, where, surrounded by a

multitude of cases which demand his care and attention, by the noise and tumult of battle, he has little time for deliberation, and must act quickly and energetically. Many circumstances are here to be considered, which have a most important influence over the welfare of the patient, and which seldom occur in private practice. Patients who have sustained injuries at home, and have recovered without amputation, would probably have died, had these occurred in time of war, and had they been subjected to all the fatigue, care, pain, anxiety, and want of sufficient attention, which they would often have been obliged to experience. Indeed, the circumstances accompanying the injury are often as important to be investigated, as the nature of the wound itself. With respect to some wounds, there can be no doubt, all judicious surgeons agreeing, as to the necessity of amputation. Such, for instance, are cases in which a limb is carried off by a cannon-ball, those in which a large joint has been disorganized, and where the principal vessels and nerves of a limb have been destroyed, with fracture of the bone, etc. But although some cases occur in which no doubt can exist, there are others which demand, as we have already said, all the judgment, and profound reflection, of the practitioner. Some cases of compound fracture, are of this nature. When the parts are much contused, and there are many splinters of bone scattered in the soft part, and particularly if there is a lesion of the principal artery or nerve, the indication for amputation is evident. If, on the contrary, the splinters of bone are few, and there is little injury of the soft parts, the limb can generally be preserved. In compound fractures, occuring in battle, most surgeons are in favor of amputation. Still, notwithstanding this general precept, there are exceptions. Cases of cure are recorded, where the injury has been exceedingly great, the patients refusing to submit to amputation. Cases of this kind are recorded by almost every writer on surgery. These, however, do not affect the general rule. "Some cases are so difficult of decision," says M. Dupuytren, "that it would be necessary for God to send angels upon the earth, to practise surgery, and decide rightly these doubtful cases." The division of the principal nerve of a limb, never can, of itself demand amputation, except when tetanus ensues, and will not yield to ordinary means. "Amputation then presents a resource sometimes useful, but most generally of little avail." "Where there is lesion of both the main artery and nerve of a limb, amputation, is not absolutely called for; however, it cannot be denied that the chances of cure are small, inasmuch as the limb is deprived of its elements of nutrition, for a time at least, and of its sensibility and movements forever. If the soft parts are much injured, and especially if there be fracture of the bone, amputation becomes indispensable." The remaining observation of M. Dupuytren on this subject, are very interesting, but we must leave them, and pass to a subject, equally difficult, viz.—the time at which amputations should be performed. Formerly there was much difference of opinion on this subject, some surgeons contending for immediate amputation, others for postponing it until the symptoms of inflammation, etc., had disappeared. Among the advocates of this latter opinion, was M. Faure, to whom the prize dissertation on the subject was adjudged; but the experience of almost all modern surgeons is in favor of immediate amputation in cases of gunshot wounds. By immediate, however, it is not meant that the operation should be performed instantaneously,

or before the first symptoms of depression, or prostration, shall have subsided. The shock of amputation, added to that which the system has already sustained, cannot fail to be injurious, and often fatal. We should endeavor to select a period intermediate to that of depression and re-action, so that we may not run the risk of extinguishing the vital spark, or, by delaying too long, induce the inflammatory state of the system, by the excitement of the operation. When the warmth has returned to the surface, the pulse has regained some force, the intellectual faculties are in operation, and the courage of the patient has returned, we may then operate. By so doing we save the patient from the long and tedious suffering, and risk of life, to which he would have been subjected, should we have previously determined to run the risk of secondary amputation. According to M. Dupuytren, and most surgeons, this period generally extends from one to six or eight hours, depending, of course, upon the constitution of the individual, and the nature of the injury. With regard to the mode of amputation, and the dressing to be employed, M. Dupuytren adopts the usual plan, and prefers union by first intention. We have endeavored, thus far, to give the reader a general idea of the nature of the work, and if it should appear that some parts have not been sufficiently dwelt upon, it was because they presented nothing new, or with which the profession have not long been familiar. We have sought to select such parts, as it was hoped, might prove interesting. In the next volume, wounds of the different regions will be considered.—*N. A. Archieves, May,* 1835.

C. E. I.

2. *On Scrofula.* By James Eager, M. D.—Dr. Eager has published a somewhat elaborate paper on the nature and treatment of a disease, which proves a great scourge in this country. The author was a house surgeon in some of the Parisian hospitals, and had good opportunities of witnessing the effects of various modes of treatment, and especially the treatment of iodine. On the nature and causes of this too well known disease, we need not dwell. The exhibition of iodine on a large scale at the Hospital of St. Louis, in Paris, and the wonderful cures which are said to be performed there, engage our author's chief attention in this paper, and our's also.

"The use of iodine requires the greatest prudence. It has been administered internally both in simple form and combined with iron, mercury, and potass, in the form of pill or in solution. Externally, combined with lead under the form of ointment, or dissolved in water in its simple state, either in lotion, injection, or bath. All these means have had their respective advantages. They were consequently used on various occasions. Iodine taken internally constitutes the basis of the treatment where the stomach is not affected. The results of cutaneous absorption are too doubtful to admit of frictions as the principal form of administering iodine. Children take pills with much difficulty. Pure iodine may be given in the form of tincture diluted with water. Two reasons, however, prevent us from using the tincture at this hospital. In the first place the fear of mistakes in dropping, mistakes the more easily made when there are many children under treatment; and secondly our apprehensions lest the water of Arcueil (which is used exclusively in this establishment, and which contains a large quantity of calcareous salts,) may

alter the nature of this medicine. The same objection holds good with regard to the æthereal tincture of iodine, the simple or ioduretted solution of hydriodate of potass, and the alcoholic æthereal tincture of ioduret of mercury. We use the solution of iodine in distilled water called by Lugol, 'Eau minerale iodee.' Each pint of water contains two grains of iodine and four grains of hydriodate of potass, the latter being added to render the former more soluble. We have not deemed it prudent to adopt the use of the solutions of different degrees of strength which Lugol employs; because in the treatment of children, particularly when they are numerous, these different proportions offer many inconveniences without any real advantage. It is much more simple to administer a solution that contains a fixed quantity of iodine, which may be prescribed at will in more or less large doses, than to have for each patient solutions that contain a variable quantity of iodine.

The dose varies with the age, the state of the digestive canal, its influence on the disease, always beginning with three ounces of the solution, which may be gradually augmented to twelve ounces in the day. This is the strongest dose we have given, viz. ℥vj. in the morning and ℥vj. in the evening. Each ounce contains the ½ of a grain of iodine and ¼ of a grain of hydriodate of potass. In following this method we know the exact quantity prescribed. After the use of this proportion for some time, we thought to double the quantity of iodine for each pint, but were soon obliged to abandon it in consequence of the disagreeable taste of the medicine, and a sensation of heat which it occasioned in the throat. The solution may be sweetened immediately before use with sirup of gum. If mixed with this sirup long before hand, the iodine becomes decomposed, and the solution loses both its color and taste. In order to preserve it long fit for use, it should be kept in bottles well corked and opened as seldom as possible. The smallest dose to begin with is ℥j. morning and evening, which may be increased to ℥vj. each time as beforementioned. This dose is even stronger than that Lugol recommends for adults. When no accidents occur to contra-indicate its use, we continue this solution during four or five weeks, then we stop it, and give a purge of sulphate of soda or magnesia. The purgative is repeated two or three times before we return to the use of the solution. The suspension continues generally fifteen or twenty days. We then resume, and continue its use a month, then stop it again to give the purgative as before said. It sometimes happens that acute accidental diseases oblige us to discontinue the treatment for some time. Diarrhœa and emaciation, which have been so much dreaded, seldom occur; when they do, they always cease on stopping the medicine. I have seen but one case in which the patient became thin; all the other children, on the contrary, have become very fat. The appetite has increased, and their soft flesh become hard and colored. I have seen a case in which the use of iodine was followed by cardialgia, and this affection ceased on using ℥j. of bark once a day, without discontinuing the iodine; and after a short time we were able to give the medicine alone. It sometimes happens, though seldom, that the use of iodine ulcerates the mouth and affects the breath as in mercurial salivations. In some females, symptoms of cerebral congestion appear, such as epistaxis, which yielded to rational treatment. It is remarkable that these symptoms manifested themselves at the pe-

riod of puberty, and consequently may be ascribed more rationally to a deviation of the menstrual flux, than to any other cause. Messrs. Gardner and Coindet attribute to a kind of iodine saturation, accidents which have been remarked, in some patients, such as fevers, palpitation, dry cough, tremblings, loss of strength, and swelling of the legs. At the Children's Hospital we have not remarked such cases. This may be owing to the precaution we use of purging the children from time to time. Moreover, these symptoms are extremely frequent in the third stage of phthisis in patients who never used iodine. The ioduret of iron may be given with good effect in this affection, more particularly in cases where the patients are very pale, and their flesh soft and flabby. This medicine may be given in larger doses than the hydriodate of potass. We began by half a grain in ʒj. of water morning and evening, and increase it half a grain every four days. It may be increased to ten grains a day; in higher doses it induces vomiting. The solution of ioduret of iron produces diarrhœa much more frequently than the iodine solution. Iodine frictions are very useful auxiliaries to its action internally. We rub the tumors with an ointment composed either of ioduret of lead, ioduret of mercury, or ioduret of potassium. It sometimes happens (as with other medicines in all diseases,) that the ointment first used brings the tumor to a certain degree of diminution, and then it remains stationary. In such cases it is useful to substitute one of the others, and by this means the absorbent system is kept in a state of salutary excitement. The ointment of ioduret of mercury is composed of ʒj. axunge, and ʒss. of ioduret of mercury, that of lead of ʒj. to ʒj. of axunge, and that of ointment of hydriodate of potass with iodine, of ʒj. hydriodate and twelve grains of pure iodine to each ounce of axunge. The ointments of ioduret of mercury and potass determine a pricking pain that continues fifteen minutes, that of lead does not produce this sensation although applied to ulcers, spread on linen or charpie. A child ought to be rubbed but once a day, and an adult twice, in consequence of the skin being less irritable, and absorption less active in the latter; each friction during five or six minutes; and the quantity of the ointment varies with the size of the tumor, the minimum being that of a small pear or nut. We have in no case relied on frictions as the sole means of cure. They have always been combined with iodine internally and in baths. It is a matter of perfect indifference to which of the ointments you give a preference. For injecting fistulous trajets we use a solution of twelve grains iodine and twenty-four hydriodate of potass in one pint of water."*

An iodine bath is used in the hospital; but Dr. E. should have given us English weights and measures, instead of litres, etc., which are unintelligible to most people on this side of the Channel.

"Sixty-seven female children have been treated with iodine for a period sufficiently long to enable us to determine its effects with precision. Their age varied from four to fifteen years, a little more than half were over ten years old. In all of them the disease was of long standing; one was in the hospital since 1822, two since 1826, six since 1828, ten since 1829, twenty-six since 1830, and thirty-two were admitted since 1831, either before or after the 1st April, at which period the treatment commenced. In all these children the

* Dublin Journal, July, 1834.

disease presented itself under different forms. Fifteen of the sixty-seven who were treated by iodine were discharged cured of the apparent symptoms of the disease; fourteen experienced considerable amendment, which announced a speedily approaching cure. In thirteen others, although the improvement was less evident, one could judge that the cure would take place at some not far distant period; five received but little benefit from it, and, in fine, twenty did not receive the slightest advantage from the use of this medicine. Among the children cured was one admitted in 1826, two in 1829, seven in 1830, and five in 1831. Among those who experienced considerable benefit, was one admitted in 1826, two in 1828, three in 1829, five in 1830, and three in 1831. Of the twenty who were not at all relieved, two were in hospital since 1828, four since 1829, seven since 1830, and the remaining seven since 1831. All these children, with a few solitary exceptions, were much more affected at the period they commenced the use of iodine, than at the time of their admission. The disease had increased with their sojourn of many months, and even years, in the wards."

Seventeen of the sixty-seven had glandular swellings. In only four of these did the tumors entirely disappear. In thirteen cases the iodine completely failed. When left to nature, the ulcers of scrofula take many months to heal; and even then leave ugly cicatrices. "On the contrary, when art interferes, the cure is obtained in fifteen days, or a month at the farthest." Our author concludes by averring that no other remedy hitherto used in scorfula has been so successful as iodine. The paper appears to be a translation from the French rather than an original essay; nevertheless it is well worthy of perusal by practitioners in this country.—*Medico-Chirurgical Review, October,* 1834.

3. *Nitrate of Silver in Epidemic Cholera.* By Charles Lever, M. D.— We should not have noticed this subject, were it merely as setting forth a remedy for a disease which lately frightened these isles from their propriety. But it is on another account, namely, the safety with which the nitrate of silver may be taken internally, and that in large doses. The name of the medicine, and its caustic effect on the external surface of the body, have checked its internal use; though the phenomena attendant on its application to sores and morbid structures generally, might have lessened the fears of practitioners rather than increased them. The nitrate of silver is applied to an irritable ulcer on the leg or other part, and the pain is very little, while the irritability is seen to be materially lessened in a short time afterwards. To give a still more striking example: the fauces are red and subinflamed—the passage of food gives much discomfort; and there is a constant secretion of viscid saliva from the parts, clearly the product of inflammatory action. A few applications by means of a sponge to the fauces relieve or cure all these symptoms. Now it is to be remembered that the membranes at the extremities of all tubes are much more sensitive than any other portion of the canals; and therefore, as we find that the fauces, the pharynx, etc. will easily bear a solution of nitrate of silver containing five or six grains to the ounce, why should we fear that the stomach itself would be unable to bear a similar medicine? We have exhibited the nitrate of silver to some hundreds of patients—often in the dose of four and six grains a day,

and never saw any injurious consequences result. The remedy is exceedingly valuable in many affections of the stomach.

In our Liverpool contemporary of July last, Dr. Lever has stated that during extensive observation of cholera in the cholera hospitals of the north of Ireland, he was led to attribute the general failure of remedies to the great irritability of the stomach, which prevented the reception, or the retention of medicines. The first case which Dr. L. relates was one of the most hopeless and deplorable character. The face, neck, and chest were deeply livid—skin cold—fingers corrugated—hearing gone—voice inaudible—pulse imperceptible—thirst insatiable; but vomiting incessant, whenever any thing was taken into the stomach. In this forlorn condition, Dr. L. dissolved thirty grains of the nitrate of silver in three ounces of distilled water, which she swallowed at once. She lay quiet for six minutes, when she vomited up a small quantity of whitish turbid fluid, and then remained perfectly at rest for twenty minutes, when Dr. L. left her. In three hours he returned, and found that the patient had sunk into a kind of slumber, and had had no recurrence of vomiting. The other symptoms remained the same. She continued in this state till the next day, without sickness; but with intense heat in the stomach. She drank freely all the night of weak brandy and water, without rejecting any of it. Reaction took place, and she completely recovered. Dr. L. saw the patient for nineteen months afterwards, and she never evinced any symptom of gastritis or other affection of the stomach. In the second case twenty grains of the nitrate were given in an ounce of distilled water. Most of it soon came up; but the vomiting ceased, and recovery took place. The usual dose, however, was ten grains to the ounce of distilled water. We think this document valuable, not only as respects the treatment of cholera; but as proving that the remedy, even in large doses, is unattended by danger.—*Ibid.*

4. *On Manual Assistance in Abortion.* By Mr. Wainwright, of Liverpool.—Mr. W. has published a paper on this subject in the 3d number of the Liverpool Medical Journal, which deserves attention. Mr. W. does not advocate indiscriminate interference in cases of abortion: because, under proper treatment, the majority of cases will require no manual assistance. He properly observes, also, that "until every hope is lost of preserving the ovum, or until the condition of the parent demands energetic assistance, the adoption of manual aid would be altogether unjustifiable." Mr. W. contends that, in all severe cases of abortion, the state of the os uteri should be ascertained, and that as early, and as effectually, as during actual labor. This examination is peremptorily required when the discharge goes on from day to day, confining the patient to bed, and blanching her countenance. The following appear to be the practical maxims laid down by our author.

"1st. In many instances, a *separation and partial expulsion of the ovum* will be found, and very slight assistance, by moving it from side to side, and gently drawing forwards, will at once remove the whole from the orifice, and the hæmorrhage will immediately cease. Case No. 2 offers an example of what may be experienced under those circumstances. The assistance required in this case was certainly not slight, nor easily afforded, yet the end was fully attained,

and no mischief occasioned. It will be observed that I found it requisite to steady the uterus whilst I introduced the fingers through the orifice, and that this was effected by the left hand applied above the os pubis. I must add, however, that I do not think this plan will be effectual in every case, as in some individuals I have found it almost impossible to overcome the action of the abdominal muscles, especially of the *recti*. These seem to act, in some cases, almost involuntarily, when the hand is applied to the abdomen, whilst in others, the hand may be forced with little difficulty into the pelvis. The vagina, too, will offer some difficulty occasionally, and doubtless more when the patient has never borne children. It is unnecessary, however, to dwell upon this point, as it must be evident that unless the hand be allowed some degree of liberty in its movements, the operation in question cannot be effected.

2dly. The next two states I would allude to, are, first, where the *os uteri is found dilated, or dilatable, and a body is found projecting above;* and secondly, where the *os uteri is found dilating, and the membranes projecting*: especially during the continuance of a pain. These cases I believe to be, in many instances, the same, only in a different stage. I say, in many instances, because I am quite aware how often the tender membranes give away, allowing part of the conception to be expelled, whilst the residue remains. I class them together, however, because the same treatment is often required. Should the symptoms not be particularly urgent, and especially if the pains be frequent, it may be well to wait a little, that, in the first case, the contents may be propelled somewhat lower, and that in both, if possible, the natural efforts may accomplish the expulsion. Under other circumstances, however,—as Cases No. 3 and 4 will show,—manual assistance may be effectively and safely given.

3dly. It will sometimes be found, on enquiry, that a *fœtus has been expelled, but no secundines have been discovered.* Of course a most diligent search will be made for these, as it is very possible they may have been overlooked, or mistaken for a coagulum. Should the search however, be in vain, I could not acquit the practitioner of neglect, did he omit a vaginal examination, and were his patient afterwards to suffer from any of the effects of retained placenta. The decidua will often be found hanging at the os uteri; or if the pregnancy be rather more advanced, say about four months, it is not improbable that the funis,—or some apology for it, or a shred of membrane, or something,—may be suspended at the vagina, or at the os internum, and then the existence of something more within the uterus may well be inferred. Case No. 1 was of this description, and the treatment I adopted then I firmly believe to be the best that could be employed. The patient recovered extremely well. Some time had elapsed before I arrived, and I doubt not this explains the contracted state of the parts, and the difficulty I had in extracting the portion which remained. I think, therefore, as little time should be lost as possible; and that a gentle and cautious effort should be made to dilate the os uteri, and to extract that which remains. In the latter periods, at least, it may be remembered that the orifice has once been dilated to admit the passage of the fœtus, and surely little injury can be inflicted by distending it to the same extent, and often little more will be required. Here I would remark, that much misapprehension has been caused by this observation, 'that as before the sixth month

the *hand* cannot be introduced into the uterus, therefore no manual aid can be given before that period.' Now the truth is, that in the earlier months it is absurd to think even of introducing the hand. One, two, or three fingers are all that are required, and that are almost ever spoken of. Case No. 6 exhibits the fatal effects of allowing the placenta to remain. It is true, that in this case the first gush of blood might be sufficient to account for all the consequences, yet the subsequent losses must have contributed to the fatal result.

4thly. At other times, however, whether a portion of the embryo be expelled or not, *a rigid state of the os uteri* will be found, absolutely defying the most resolute to overcome it. One author, I find, confesses he could not succeed, though 'he tried with all his might, and repeated his efforts ten times!' This, it may be presumed, would oftener be found in first pregnancies, and here, I hope, no one will follow the example of this courageous practitioner. I may add, for the credit of modern obstetricy, it was not a modern accoucheur. This, then, is the case of all others for the tampon. I have never met with this case, and I must rely, therefore, on the testimony of others. It is on this also that I rely, when I suggest, during the progress of such a case, the propriety of occasionally ascertaining the state of the os uteri. It may not be dilated at one visit, whilst it may be amply so at the next, and might then admit of manual aid.

Lamotte was called at two in the morning to an abortion of five or six months, from accident, attended with severe flooding. The os uteri was very rigid, but at six it was sufficiently dilated, and he effected the delivery. Giffard relates the case of a woman at about her sixth month, who had flooded for two or three days before he saw her. On the first day of his visiting her, he found 'the os internum not dilated enough to admit the end of one finger, and not easily to be dilated; on the second day she grew weaker, but still he could not dilate the orifice, but on the third day it was in a different state, and he quickly delivered her, when the hæmorrhage immediately stopped.' The same author relates an interesting case (No. 153,) advanced only to the ninth or tenth week. 'The woman had had hæmorrhage for some days, so that she was very much sunk, and had fainted several times. The os internum was very narrow, not allowing one finger to pass up; yet with the end of one finger he felt a soft substance within, lying at the mouth of the womb. She had much pain in the back. Three hours after, the orifice admitted one finger, which he passed directly through, and, bending its extremity, hooked out the contents, when all pain and flooding ceased.'

The above quotations, I think, will be admitted as warranting the practice I have suggested under this head, and may also be taken as strongly illustrative of the general question.

5thly. The above cases I supposed complicated with hæmorrhage. There is, however, another class of cases, unaccompanied with this alarming symptom, in which I believe manual aid may most advantageously be afforded. I allude to those in which the fœtus has been expelled with *little or no flooding, but where the secundines* (*decidua or placenta*) *remain*. Cases No. 5 and 7 are instructive cases in point. The treatment adopted by Mr. Park fully shows the practice usually employed, and this, with his observations attached, may, in the opinion of many, fully authorize its adoption in future. Few,

I am sure, hold that excellent surgeon in higher estimation than I do, yet I cannot withhold expressing what I fully believe experience will justify me in stating. It is universally acknowledged, amongst writers, that a woman is unsafe until the placenta is expelled, and who has not witnessed the uneasiness both of patient and friends until this is accomplished, proving a general consent to the same fact! In case No. 5, I left it, and the consequence was that it was detained two months, during which time the patient was never well; and at length it was expelled with a fearful hæmorrhage. In the sixth case it was left, and for six days both medical attendants, patient, and friends were in constant doubt of something going wrong, but to our relief it was then expelled, a disgusting mass. These, however, I consider good escapes, rather than proofs of good treatment, because I find that reports of more serious consequences abound in the writings of those who have enjoyed the widest fields for observation. Dr. BURNS says, p. 297,

'If the gestation has not advanced far, the placenta may be expelled in small portions for many months, but the patient is all the while languid, hysterical, and subject to irregularities of the menstrua, and very often to obstruction. But more frequently the symptoms are very acute. We have loss of appetite, prostration of strength, tumid or tender belly, frequent small pulse, hot skin, and various hysterical symptoms. The discharge from the vagina is abominably fetid, and hæmorrhage sometimes occurs to a violent degree.'

Mr. INGLEBY's observations are to the same purport, and he relates a fatal case from the placenta being retained. (p 118.)

SMELLIE gives a case from Mauriceau, vol. 2, p. 171, strongly proving the same point.

A woman miscarried at the fourth month, and the placenta was left entire. The midwife said the womb had closed, and she could not extract it. He saw her on the third day, and found her statement correct. He could not remove it. She was at the brink of the grave, from 'a prodigious flooding.' The placenta became putrid, and a most violent fever ensued, 'accompanied with exacerbations two or three times a day, and with faintings and other symptoms usual on such occasions.' The placenta was at length expelled, and the woman recovered.

Smellie mentions another example, which happened in the practice of one of his pupils. (Vol. 2, p. 167.)

The placenta was retained after an abortion at the fifth month. The patient was subject to constant draining for three months, until she became pale and emaciated. At this time he visited her. The os internum admitted two fingers, with which he was enabled to separate a hard round substance from its attachment to the uterus, but could not bring it away. He then used a blunt hook, and removed it in three portions. The discharge ceased, the woman recovered, and afterwards bore children.

The above cases clearly prove the great importance, and, in my humble opinion, the absolute necessity, of removing, in all possible cases, the whole of the uterine contents; and here I must especially urge the removal being accomplished as quickly as possible. It is a remarkable, but a well-established fact, that the uterus and its orifice become almost permanently contracted very shortly after even a partial expulsion of its contents. Cases No. 1 and 7 in this paper show

the strong tendency to this contraction, but other cases prove it completely. MAURICEAU mentions a person who miscarried at the sixth month; part of the after-birth remained, and before he arrived the os uteri was so closed he could not effect its removal. Dr. DEWEES dwells particularly upon this fact. (P. 414.)

I feel it, however, a duty to state, that Dr. DENMAN, who appears to be the oracle of British accoucheurs, and in many respects most deservedly so, does not advocate the removal of the placenta when retained after abortion. His concluding remark is as follows. (4to ed. p. 490.)

'At all events, much less mischief may be expected from the retention of a putrid placenta at this time, than from attempts to force it away by the medicines usually given for that purpose, or by manual assistance.'

I would simply beg to make this observation. I can find no argument to justify the use of 'force' in this case, but between the mischief arising from a judicious endeavor to remove a retained placenta, and that arising from a putrefying substance within the uterus, an organ possessing sympathies so numerous and so important, I leave the reader to decide."

The cases themselves we are unable to insert, and they cannot be abbreviated. — *Ibid.*

5. *Observations on Catarrhal and Catarrho-Rheumatic Ophthalmia.* By FRED. TYRRELL, Esq. — In our quarterly contemporary for July last, there is a good practical paper on the above subject, from the pen of a good practical surgeon. Mr. Tyrrell remarks, that during the concluding part of last winter, and up to July of the present year, catarrhal ophthalmia has been more prevalent than he ever knew it to be. The disease was often so severe as to affect the sclerotic as well as the conjunctiva. The following is Mr. T's. descriptionof the

CATHARRAL OPTHALMIA.

' It commences with stiffness and heaviness about the palpebræ, with slight irritation or itching of the ciliary margins, and a sensation as if some fine particles of dust had lodged on the surface of the globe; there is usually slight intolerance of light, with increased secretion of tears and agglutination of the lids during sleep. After a short time the patient experiences pain, which is increased by motion of the eyelids, or by exposure to bright light. These symptoms are aggravated about sunset.

On examining the eye, there is perceived in the early stage slight thickening and redness at the free margins of the lids, and probably some coagulated secretion collected at the inner canthus and about the cilia. The ocular portion of the conjunctiva exhibits a few tortuous vessels filled with red blood, whilst the palpebral portion is red, tumid and villous, like crimson velvet; and in the lower folds between the ocular and palpebral parts of the membrane a little whitish or slightly yellow and thick mucous secretion is lodged.

The inflammation, however soon spreads to the ocular conjunctiva, the vessels of which become extensively injected with red blood, and, on close inspection, are found to form a beautiful net-work. In severe cases, the conjunctiva is partially thickened and elevated by deposition of serum between it and the sclerotic, constituting a par-

tial chemosis, and occasionally small spots of ecchymosis are perceived from the rupture of some minute vessels.

If the disease extends farther, it produces ulceration of the cornea.

This ophthalmic disease seldom exists without some symptoms of general catarrh, such as headache, sense of fulness about the frontal sinuses, sneezing, increased secretion from the nose, and some general febrile symptoms: the local and general diseases are usually reciprocal.

In young subjects the catarrhal-ophthalmia is often modified by a strumous diathesis, which occasions the local affection to be more severe, augments especially the intolerance of light and lachrymation, and disposes to the formation of pustules.

This disease may occur at any period of life. It is produced by a peculiar state of the atmosphere, during the continuance of which there is considerable difficulty in entirely removing the ophthalmia."*

The treatment must be modified by the severity of the symptoms, the extent of the constitutional disturbance, and the condition of the general power.

"When there is simply affection of the palpebral conjunctiva with morbid mucous secretion and little general disturbance, and sufficient constitutional power, I prescribe a brisk aperient of calomel and colocynth, or calomel and rhubarb, or jalap, and afterwards a small quantity of some of the preparations of mercury with antimony, or with Dover's powder at night, and a mild saline aperient in the morning, also some mild diet, principally vegetable and farinaceous, with quiet, and the avoidance of cold or damp, or of bright light.

Locally, I employ merely tepid water, to cleanse the eyes; or warm water to foment them when uneasy, and some simple ointment, which should be smeared upon the lids and eyelashes before the patient goes to sleep.

When the local disease is acute and the constitutional affection considerable, general or local bloodletting must be resorted to; the former being only necessary in persons of naturally full habit or subject to inflammatory diseases; and after bloodletting the treatment above described will be applicable.

In a few days the mild or acute form, if treated as I have described, passes into the chronic stage, which is denoted by a general mitigation of symptoms, but more especially by an alteration in the mucous secretion, which becomes thin and pale, and by the change in color of the conjunctiva, which loses its brilliaht aspect, and presents a more pale and lax appearance; at the same time it is found that the general power is failing under the continuance of the constitutional affection; the treatment must therefore be changed. Instead of exciting the secretions, they must now be kept as near as possible in their natural state, and a more generous diet must be allowed, but still the patient must abstain from such food as may tend to excite vascular action. It is necessary, in persons of feeble power, to give, in addition, some medicinal stimulus, as some of the preparations of bark, mineral acid, or ammonia.

To subdue the remains of the local disease, a slightly astringent lotion must be substituted for the tepid water, as a solution of the acetate of lead, half a grain, or a grain, to the ounce: or a solution

*Med. Quart. Rev. No. IV. p. 416.

of alum, a grain or two grains to the ounce; the sulphate or acetate of zinc, a quarter or half a grain to the ounce, or nitrate of silver in the same proportion. Also a stimulating ointment must be applied instead of the milder form, as the dilute citron ointment composed of half a scruple or a scruple of the unguentum hydrargyri nitratis, to two drachms of unguentum cetacei, or a scruple of the unguentum hydrargyri nitrico-oxydi to a drachm of the unguentum cetacei."

Where a strumous diathesis prevails, and where, as was observed, there is much intolerentio lucis, counter irritation by blisters is necessary. The intolerance exists both in the acute and chronic form, which renders it difficult to distinguish between them, though it is necessary to discriminate in the treatment. Mr. T. is convinced that more benefit results from repeated blisters, than from keeping one open. Cold applications are injurious to the eyes of strumous children. He uses tepid water in the acute stage, and trusts to general remedies in the chronic. We now proceed to the

Catarrho-Rheumatic Ophthalmia.

"This affection commences with symptoms similar to those of the catarrhal, but with more early suffering: for in addition to the symptoms of the catarrhal disease, the patient experiences a constant dull aching pain in the globe of the eye, and in the temple and eye-brow: the globe feels tense, and as if it had been bruised; and these pains and sensations become so much augmented towards evening as to prevent sleep. The accession of pain is accompanied with intolerance of light and a feeling of dryness of the conjunctival surface, so that the motions of the eyelid upon the eye produce excessive pain; but occasional gushes of tears occur, which for a few moments produce some relief; while the symptoms continue thus acute, the globe of the eye, the temple and eye-brow, are extremely tender to the touch.

In the intervals between the severe attacks, when there is but slight intolerance of light, vision is frequently indistinct, and occasionally small black spots or muscæ are perceived by the patient.

On superficial inspection of the eye, the appearances denoting catarrhal-ophthalmia of an acute kind are apparent; such as the red palpebral margin, the thick mucous secretion, the thickened and villous state of the palpebral conjunctiva, with the tortuous vessels and vascular net-work on the ocular portion of the membrane; but an attentive examination soon discovers that the color of the ocular conjunctiva is more uniform and deeper than in the simple catarrhal disease: and this upon further observation is found to depend upon the existence of another set of minute vessels filled with red blood, which can be traced in the intervals between the tortuous vessels of the conjunctiva as passing beneath them in a straight course from the margin of the cornea towards the orbit; these vessels are situated in the sclerotic coat; they are occasionally found more abundant in one part than another; as, for example, more upon the nasal than the temporal side of the cornea, and of course augmenting the depth of color in such particular situations: it requires, therefore, a careful examination of the whole ocular surface to detect them.

When the vision is affected, being cloudy or troubled with muscæ, some change is perceptible in the iris; its pupillary aperture is contracted, its brilliancy is diminished, or its color slightly altered; which

circumstances are best detected by comparing the iris of the affected eye with that of the healthy organ: the motions of the affected iris also are sluggish. The iris suffers in consequence of inflammation extending to it from the sclerotic.

Sometimes a partial or complete ash-colored line is seen between the cornea and vessels injected with red blood, most frequently the line forms a complete circle around the cornea; but I have seen it merely occupying a portion of the circumferance of the cornea, being apparent at its temporal and nasal margins, and deficient superiorly and inferiorly. This appearance is considered by the continental and also many of our own ophthalmic surgeons, as a diagnostic of rheumatic inflammation. Such opinion, however, I consider to be erroneous, for I have seen a similar line present in iritis, simple sclerotitis, and choroiditis. I believe it results from the mode of junction between the sclerotic and cornea occurring when any of the diseases alluded to are present, and seen most distinctly when the junction of the two structures is very oblique, but not at all evident when the textures are joined with little or no obliquity. Now and then the margin of sclerotic overlaps or joins obliquely the circumference of the cornea, more in one part than another, and this I have observed most frequently on the temporal and nasal sides, so as to make the transverse diameter of the cornea less than the perpendicular diameter. When such formation exists and inflammation affecting the sclerotic occurs, the ash-colored line is apparent only towards the nose and temple."

The exciting causes are cold and moisture; and Mr. T. suspects that the simple catarrhal affection is often converted into the rheumatic, by the injudicious application of cold lotions.

Treatment.

When inflammation preponderates in the conjunctiva, and the sclerotic is but slightly affected, leeches must be applied, and brisk purgatives given. For a few days, Mr. T. employs the same means as in the simple catarrhal affection, excepting that, when the circumorbitar pains are severe, he directs blisters, or a few grains of mercurial ointment, with opium, to be rubbed on the temple and forehead at night. As soon as the severity of the conjunctival affection has subsided, he prescribes a more nutricious diet, and small doses of cinchona and soda, sarsaparilla and lime-water, or some mild tonic with an alkali. Locally, warm water is occasionally used to cleanse the eye; "but the patient must carefully wipe it, and not allow the surface of the lids to remain moist, as I am confident it augments the mischief." The repetition of blisters is serviceable where there is much intolerentia lucis, or continual circumorbitar pains. When irritability, with little vascularity, remains, a drop or two of vinum opii once or twice in the twenty-four hours, dropped into the eye, is useful.

"If the catarrhal affection of the conjunctiva be slight, and the inflammation of the sclerotic severe, without, however, much affection of the iris, local bloodletting is rarely necessary. The patient is at first to be freely purged by some drastic medicine, after which a full dose of colchicum, with a narcotic, may be given, especially when there is any marked rheumatic diathesis: the best period for administering this dose is in the evening, a short time before the usual pe-

riod of exacerbation. I have known it to subdue altogether the sclerotic inflammation, leaving but a slight catarrhal ophthalmia If the first dose appears to alleviate the disease, it may be repeated every six or eight hours for three or four times; but I have never found any benefit from a longer continuance of this remedy, nor have I seen much advantage from it when it has occasioned disturbance of the stomach or bowels. I consider its beneficial action very uncertain.

Otherwise, I prescribe according to the state of general power, which it is of the utmost importance to observe, in order to treat successfully. Very often, when the local disease appears acute, the general power is extremely feeble; or, on the contrary, when the local disease is slight, the constitutional power is good; but occasionally, the general action is energetic when the local disease is severe. When the action of the heart and arteries evinces deficient power, although the local symptoms and appearances may indicate an acute form of disease, any active depletion likely to affect the system ought not to be adopted; blistering is the best means of relieving the local congestion; besides which, medicines should be given to correct any error in the principal secretions, especially those of the bowels, skin, and kidneys: the two latter I find most frequently to be deranged. Antimonials with salines, are therefore most serviceable after the bowels have been acted upon. The patient must be allowed a good nutricious diet, and even a small quantity of stimulus, if much addicted previously to its use.

As soon as the secretions are in a healthy condition, tonics should be exhibited, and if the general power is good I prescribe five grains of the pulvis cinchonæ, and an equal quantity of the sodæ subcarbonas exsiccata every four or six hours; and I know of no remedy so generally serviceable in the state of the disease above described. I am indebted to Mr. Wardrop for the suggestion of this medicine. I have frequently known it succeed in relieving inflammation of the sclerotic, when the larger doses of the same preparation have been taken some time without benefit. Should this remedy fail, I give the sarsaparilla with lime water, but with either medicine it is necessary to administer an occasional purgative, with or without some mercurial, according to the state of the biliary secretions.

When the patient's power is feeble, I usually commence with the sulphate of quinine, as a tonic, in doses of three or four grains every four or six hours; and if there is a disposition to inordinate cutaneous secretion, I prescribe, in addition, twenty or thirty minims of the dilute sulphuric acid. Under these circumstances, also, a generous diet is requisite, and a moderate quantity of any stimulous to which the patient may have been accustomed. I have lately seen many cases in which the catarrho-rheumatic disease had continued, (principally, however, of a rheumatic character,) for six or seven weeks, or more; a depletory treatment having been persisted in, and in which a cure has been effected in as many days after the tonic plan has been adopted.

It sometimes happens that the disease has extended from the sclerotic to the iris before the patient applies for relief, or that the affection being treated under the supposition that it is merely a conjunctival inflammation, the remedies employed have not been sufficient to prevent the extension of the disease to the iris. Inflammation of the

iris is indicated by a loss of brilliancy, an alteration in color, a thickening of the pupillary margin, and a contracted and sometimes irregular condition of the pupillary aperture. When the iris is but slightly diseased, there is no occasion to deviate from the treatment which I have just described; but if the inflammation of this texture is decidedly developed, it is absolutely necessary to resort to mercurial treatment to stop its progress, otherwise the plan of depletion which I direct in the early stage of catarhal or simple catarrho-rheumatic ophthalmia, may not arrest the inflammatory action in time to prevent deposit of lymph in the texture of the iris and in its pupillary margin, by which the pupil may be rendered permanently irregular, or its margin become in part adherent to the anterior capsule of the lens, and the transparency of the capsule itself be materially injured.

The exhibition of mercury must be carefully and guardedly resorted to, especially when the constitution is feeble, which I have observed it most frequently to be in persons suffering from this disease; nevertheless I deem the use of the remedy of the greatest importance, if given in small doses, at short intervals, whilst the patient is allowed a nutricious diet, and the secretions kept in good order: the surgeon may, by keeping a careful watch, always stop the exhibition of the medicine in time to prevent any mischief.

At the same time that mercury is given, the extract of belladonna should be applied to the eye-brow night and morning, to keep the pupil in a dilated state, and prevent any adhesions taking place between the pupillary margin of the iris and the anterior capsule of the lens, with a contracted pupil; or to aid in the separation of such adhesions, should they have been formed previously.

The mercurial treatment must be stopped as soon as the inflammation of the iris subsides, whether the system be affected by the remedy or not. I have seldom had occasion to give mercury so as to produce any marked effect on the system in these cases, and have always found that when the remedy has by accident, or inattention, created much general disturbance, the cure of the remaining disease in the sclerotic has been more difficult. The disease in the iris being subdued, the plan I have recommended for relieving the inflammation of the sclerotic should be immediately adopted.

In several instances which have come under my observation during the last few months, although the general and local diseases have not been very severe, the patients have experienced excessive debility, and have not recovered until they have had the benefit of change of air for a short time.

I have been desirous to shew, in the preceding observations, that it is of much importance, by careful examination of the organ, and attention to symptoms, to ascertain the extent of disease before treatment be commenced, and that the treatment must be varied according to the extent and severity of the inflammation; but especially to point out the existence of apparently severe local inflammation, with a feeble state of the constitution, which I have observed frequently during the late prevalence of these diseases; for I am satisfied that inattention to this circumstance has been the principal cause of want of success in the management of most of the cases which I have seen in consultation."

We have thus laid the whole substance of Mr. Tyrrell's paper before our readers, as it will prove serviceable to the practitioner in the daily rounds of his avocation.—*Ibid.*

6 *Lepra Vulgaris, invariably treated with success*, by EDWARD BECK, M. D. of Ipswich, Eng.—The object of Dr. Beck is to display the obstinacy of lepra and psoriasis—their indisposition to yield to the treatment usually recommended—and the superior efficacy of the plan which he proposes and pursues. Without further preface, we shall state the plan in question.

"When the disease is of considerable standing and attended with much pain, soreness, and inflammation of any one part, a preparatory plan of treatment will be required, which is to be principally antiphlogistic.

I have generally recommended abstinence from wine, and prescribed a few doses of aperient medicine; equal parts of Pil. Rhei Comp., and Extr. Colocynth Comp. with or without two or three grains of Pil. Hydr. answer the purpose well. The Sulph. Precip., in combination with Sod. Subcarb. Excis. in doses of half a drachm of the former to five grains of the latter, two or three times in the day, so as to act freely on the bowels, has a beneficial influence in reducing the irritation. The Liq. Plumb. Subacet. Dilut., or a lotion containing the Plumb. Subacet. in combination with Zinci Sulphas, I have found the best local applications, during the very irritable state of the disease: two scruples of the former, with half a drachm of the latter, to a pint of distilled water."

The preparatory plan, therefore, consists of active aperients for some days—the application of the lotion that is found to suit best—and, when much local irritation exists, the use of the powder of sulpher and soda during three or four times a day. Sometimes there is no necessity for a preparatory plan of this description. As soon as the irritation and inflammation of the parts are moderated, the specific treatment is required.

"The specific plan consists in applying the following linimen the parts affected:—

℞.—Picis Liquid.
Sulphuris.
Adipis Præpar. sing. unciam misce.

The following pills are at the same time to be taken regularly:—

℞.—Picis Liquidæ unciam dimidiam.
Flor. Tritici q. s. misce. et divide in Pilul. sing. gr. v.—iii. ad vi. ter in die sumantur.

Where the irritation is very considerable, a milder liniment may first be had recourse to, as the following:—

℞.—Picis Liquidæ.
Sulphuris singul. unciam dimidiam.
Adipis Præparat. uncium. misce.

This preparation, should it irritate very much, may be gently rubbed on the parts affected with the leprous eruption at night, allowed to remain on a few minutes only, and then wiped off with soft linen. The application usually increases the pain for a few minutes, but afterwards the parts become much more comfortable to the patient's feelings. In three or four days the former liniment can be borne and

will be required, and it may be allowed to remain on the part all night, and be washed off in the morning, or it may be applied and remain on it for days together, for it is better that the part should not be frequently washed, as the local irritation is considerably increased thereby. Where a large surface, a limb for instance, is covered with the leprous eruption, it may be gently rubbed well over with the liniment, and the part covered with linen (in the form of a stocking if it be the leg, or a glove if it be the fore-arm, or back of the hand.) Every second or third day will suffice to apply the liniment afresh. This is a very efficacious mode of applying the liniment, but is adapted only for those in the lower class of society, who might have no objection to the scent of the ointment. Among the upper class of society, this plan might be seriously objected to, in which case the application should be used at night only, and washed off in the morning. But where single patches are situated, some of the ointment should be applied thickly to them, and two or three pieces of lint confined over it, with strips of adhesive plaster—this may be allowed to remain for days together, and no scent can escape if the lint be well confined. Most of the small leprous spots, which are not of long duration, will disappear under the general plan of treatment, and only an occasional large patch will require this attention for a short time.

As the pills sometimes occasion headache and disagree with the stomach at first, they may be commenced with by taking two, three times in the day, and very gradually increasing to six, three times in the day, which will be found an efficient dose, and as much as most stomachs will well bear. The torpid state of the bowels that almost invariably accompanies lepra, usually gives way to the use of the pills.

Where the disease is of short duration, and is not confluent, the preparatory plan of treatment may, in a great measure be dispensed with, both locally and generally.

A single dose of the pills at night, followed in the morning by a teaspoonful or two of calcined magnesia, or half an ounce of the sulphate, will be found sufficient; but, without some preparation for the pilulæ picis, they will be found to occasion nausea and headache, at which the patient, taking an early disgust, will with difficulty be persuaded to resume the use of them. In all cases, where the local irritation is considerable, the stronger form of the ointment may, from the first, be had recourse to. After the patient is able to take a full dose of the pills, the use of aperients may, in almost every instance, be discontinued, for the pil. picis alone regularly and sufficiently act upon the bowels.

I particularly wish to point out the necessity, where much local irritation is present, of using the milder Ung. Picis Comp., and that it remain on only a minute or two. Without this precaution, the patient may take a prejudice against the application, from the increase of pain it produces, and discontinue it altogether."

Both pills and ointment are necessary to effect a cure, and their use should be continued for some time after the disappearance of the disease. Two months. or even more, will be required for the cure of severe or long-continued lepra.

Our author's treatment of psoriasis is put forward with less confidence than that of lepra. It consists of anti-phlogistic treatment while heat and irritation are considerable—aperients—after a few days the application of an ointment, consisting of half an ounce of camphor, and two ounces of cerat. cetacei—and the exhibition of sulphur and soda.

We have no space left for comments, which we leave to the fancy, the judgment, or experience of our readers.—*Ibid.*

7. *Ophthalmia treated with lotions of Corrosive Sublimate.* By M. Bally.—M. Bally, in a paper published by him a few years ago, in the Gazette de Sante, strongly recommended the employment of a solution of oxymuriate of mercury in ophthalmia, whether of an acute or of a chronic character. The following two cases are adduced, as confirmatory of its good effects.

A woman was seized, after exposure to alternate heat and cold, with a violent inflammation of the conjunctiva of the left eye. The organ was exceedingly painful, and could not tolerate the impression of light —she felt as if sand had got in between the lids and eyeball, and the tears were hot and burning. The disease had lasted six days, when this patient consulted M. B., who ordered her to bathe the eye, a dozen times at least in the course of the day, with a collyrium, composed of four grains of the sublimate and four ounces of water. In the course of three days, the inflammation had almost entirely disappeared, and by the sixth the woman was pronounced cured.

In the second case, the ophthalmia had continued for eight weeks before the patient consulted M. B. He had been repeatedly leeched, blistered, and also well purged, but without much benefit. Both eyes were inflamed; and on the cornea of the right one there was a nebulous spot, of the size of a millet seed;—this eye was more painful than the other, and the sight was more imperfect. M. B. immediately ordered the use of the sublimate collyrium, and a blister on the nape of the neck. No change was made at any time in the treatment; by the 13th day, all inflammation had disappeared from both eyes; the speck however remained; but, fortunately, this also vanished under the application of "pommade de Janin," and the vision was completely restored. The author adds, that he could cite at least twenty other cases of ophthalmia, treated successfully by the same plan.—*Revue Medicale.*—*Ibid.*

8. *Best mode of treating Mammary Abscess.*—Mr. Robinson has communicated six cases of mammary abscess to the Medical Gazette,* for the purpose of displaying its history and treatment. We presume that the greater number of our readers are tolerably familiar with the former—that few need be informed of the occurrence of common abscess in the breast, as in any other organ or tissue—and that it is not necessary to describe at any length the mode in which obstruction of the lactiferous ducts may occasion inflammation, suppuration, ulceration of the integuments and fistulæ.

The question which has been disputed in reference to the surgical treatment of this complaint, is the propriety or otherwise of an early opening. Mr. Robinson's observations on this head are not very copious nor precise. They are as follow.

"The third case proves, that where the abscess is owing to the distention of the lactiferous tubes, the formation of fistulæ may sometimes be prevented.

The fourth case shews the result of opening by the lancet, and opening spontaneously. The former plan will generally be found the best,

* July 12, 1834.

especially in deep-seated abscess. In this case the opening made by nature was large, and the contents of the abscess were evacuated all at once, which is more favorable than usual; for generally the opening is no larger than a pin's head, and is slow in healing up, the skin being commonly much destroyed before it gives way. Even in this case that abscess was much longer in opening, and more painful, which burst spontaneously, than that which was opened by the lancet.

The fifth case more forcibly proves that the artificial opening is preferable to the opening by nature; for the first abscess being opened by the lancet, was healed in three days; whereas that which broke of itself was much slower in healing, and was slightly fistulous.

This also points out the necessity of watching these cases: the woman was desired to call on me the following day, instead of which she allowed three days to elapse; otherwise I believe the fistulæ would have been altogether prevented.

The sixth case shows this disease in its most distressing and tedious form: the breasts were permitted to become over-distended with milk; both breasts were inflamed throughout; numerous abscesses, implicating the lactiferous tubes, followed; and she suffered severely for ten weeks.

The two last cases prove the great advantage of pressure (after the inflammatory stage is gone off,) in obliterating fistulous canals—a plan which will in many instances prevent, if it does not altogether supersede, the necessity of extensively laying open the breast, a custom which used to be resorted to formerly for the cure of sinuses, and which is even in the present day, I believe, occasionally adopted."

These remarks embody little more than the usual recommendations and the common practice. The most annoying circumstance connected with abscess of the mammæ is the disposition to separate processes of suppuration, or, rather, to the formation and collection of matter in several portions of the same breast. They redound in some degree to the discredit of the surgeon, and form a serious source of distress to the patient.

It has been noticed in cases of diseased absorbent glands, and even in abscess of the cellular tissue, that suppuration does not always form in a single point, nor appear at the commencement inclosed in a single cavity. On the contrary, it has been found that it sometimes begins in several distinct portions of a gland, and that, some time elapses before one common abscess is produced. The practical rule has been deduced, to wait till such a collection has occurred before an artificial opening is resorted to. If the surgeon operates too early, he has to open in succession several abscesses instead of one.

Our own opinion is, that the fact should always be remembered by the surgeon, and that by it his practice should be mainly guided. Yet we think that too much stress has been laid upon the one, and that the other has been carried rather too far. In cases of venereal bubo, if the surgeon declines to open an abscess until a large suppurating cavity is formed, he will probably endanger the vitality of the integument, and certainly protract to an unnecessary extent the duration of the complaint. Our readers will find more detailed observations on the management of suppurating bubo in another place.

We suspect that the cases of mammary abscess and suppuration in a strumous or venereal gland are not altogether analogous. In the instance of the gland its whole texture is diseased, and will probably be

invaded throughout by suppuration. But the mammæ is differently circumstanced. The lactiferous tubes are obstructed in one part—distention, inflammation, and suppuration in that part are the result,—and there appears to be no necessity why other portions of the gland should be involved. That they *are* so will probably be found to depend upon another cause. The gland is composed of numerous lobules, with adeps and cellular tissue interposed. Inflammation occurring in one part of the gland may readily extend along the cellular processes to another. The same thing would seem not unlikely to ensue, if matter were confined, or if it had not a free exit: and such is actually the case.

If these considerations are correct, an early opening of the mammary abscess is desirable. We are convinced, for our own part, that it is so. We have treated many cases of this complaint, and were at first annoyed, as all surgeons have been, by repeated suppurations and ulterior sinuses. It appeared to us that these depended on a simple opening not sufficiently evacuating the abscess. After some practical experiments we adopted the following plan with much success:

Having satisfied ourselves that suppuration was actually established, we made with a lancet as dependent an opening as circumstances would admit, a vertical puncture being generally preferable to a horizontal one. We then introduced a probe into the cavity of the abscess, and ascertained if any sinus extended from it to another portion of the breast—or if the point of the probe could be made to project beneath the skin, in a more dependent spot than the puncture. If either was the case we cut on the extremity of the instrument, made its point project through the incision, tied around it a narrow piece of tape, or a silk ligature, withdrew the probe, and thus established a small seton between the opening originally made and that obtained by cutting on the probe, at the most dependent portion of the abscess. If more than one sinus extended from the latter, or if its formation or situation was such that one dependent opening was insufficient to empty it completely and at once, another incision was made upon the probe in the requisite direction, and another seton passed in the same manner as the former. The whole should be done at one operation, and since we have adopted this method of management, we have not been annoyed by repetitions of abscesses or formations of sinuses. We have found it, in fact, a great improvement in the treatment of this painful and troublesome affection. The operation is rather more severe at the time, but when once performed it prevents the necessity in almost every instance, of others. A patient will go through one with fortitude, but her spirits are broken and her strength of mind is shaken by its frequent repetition.—*Ibid.*

9. *Observations on Erysipelas. By* Ephraim M'Dowel, M. D. *one of the Surgeons to the Richmond Hospital.*—This forms the leading article of our Dublin contemporary for October last. It appears that the disease was epidemic in the Dublin hospitals in the beginning of 1824, and very frequently fatal. It attacked all ages and both sexes indiscriminately—the sick and the healthy—while almost every kind of injury was followed by the disease. It occurred after leeching and bleeding, venereal ulcers, and even the application of liniments to the surface. Surgical operations were so generally succeeded by erysipelas, that they were performed as seldom as possible. Like the epidemic

influenza, it was characterized by extreme prostration of strength, rendering depletion precarious, and often dangerous, even where there was strong local inflammation, and the constitution was sound. In the progress of the epidemic, there was great variety in the numbers attacked at different periods. Sometimes it would be nearly extinct in the hospital, and then unexpectedly burst forth with renewed force. It was most troublesome in Easterly winds.

"The different cases of this disease met with by the writer, were referable to one of three classes. In the first, occurring in healthy persons, and usually after injuries, there was much local and constitutional disturbance; the disease was often of the phlegmonoid form, but in other cases, the skin alone was acutely attacked. In the second class of cases, examples of superficial erysipelas, the redness was more diffused, frequently it was not very perceptible, and occasionally considerable patches of the skin were unaffected, passed over, as it were, by the disease; vesications occurred more frequently than in the more acute cases: this form attacked persons of weak constitution, or of unhealthy habits, in whom the biliary organs and stomach were deranged or diseased: the constitutional symptoms seldom ran high. Subcutaneous abscesses formed very insidiously, and frequently in considerable numbers, and, if not opened early, spread very quickly, death of the cellular membrane to a varied extent generally occured, undermining the skin, and protracting much the cure. It was often necessary to examine a limb most carefully to detect these purulent depots, the patient seldom being aware of their existence; the matter secreted was generally healthy pus. In one case of erysipelas of the head and face, succeeding ptyalism, slight pain, or rather uneasiness, had been complained of in the neck; there was no evidence of disease, but on examination after death, a very extensive *puriform* infiltration of the loose cellular tissue, about the trachea, thyroid body, and œsophagus, was found; it extended behind the pharynx nearly to the base of the cranium, and very probably was not merely an example of inflammation propagated from the skin, but also from the mucous membrane of the pharynx, which was also inflamed. In the diffused inflammation of the fauces in cynanche maligna, we have frequently similar formations of matter deep in the neck, from extension of disease from the mucous to the cellular tissue. In the third class of cases, the disease occurred in the habits broken down by want, intemperance, age, or previous organic disease of long standing, and sinking occurred very early, unless prevented by stimulants. In such cases, there was less redness and heat of surface, the affection had more of the character of erythema, with a well defined and raised irregular border; the pulse was quick and weak, the accompanying fever of the typhoid character, the tongue more or less loaded, dry and brown, or red, dry and scabrous near the apex, with elongated papillæ, the rest of its surface much loaded: this latter condition of the tongue generally indicated more or less of gastric irritation.

It is in this form of the disease, that on examination after death, we constantly find evidence of the previous existence of inflammation of the cerebral membranes, of the pulmonary, and of the intestinal mucous surfaces, the cutaneous affection being in fact but a small part of the disease. Severe rigors and diffuse inflammation of the throat, of a dusky red color, with patchy deposition of lymph, and more or less of sloughing, as in cynanche maligna, preceded several severe

cases of erysipelas of the head and face. When the scalp was attacked the inflammation generally became diffused, but occasionally, was limited pretty exactly to one half; when this got well, it was usual for the opposite side to become affected. Delitescence, or disappearing of the inflammation from one part to re-appear in another, was of frequent occurrence. There was a great tendency to the erratic form, particularly in the old, or in persons of broken-down constitution."

An attack of erysipelas was sometimes beneficial in chronic and obstinate cutaneous diseases, as lupus. When the epidemic was very prevalent, there was a remarkable tendency to diffuse inflammation of the digestive tube, without any accompanying erysipelas of the skin. The disase was then rapid — the prostration great. Dr. M'D. lost two patients in this way. The first patient was attacked with diarrhœa on the 4th of March, and died on the 12th, having exhibited tenderness on pressure of the abdomen, bloody stools, with muccus, etc. On examination, there was found diffuse erysipelatous redness of the mucous membrane of the stomach and bowels throughout — the redness being most intense near the termination of the ilium, where shreds of coagulable lymph were thrown out, abrasions and ulcers being also apparent.

Some practitioners, says our author, doubt or deny the existence of morbid appearances after death by erysipelas. He is not one of these. The fatal cases are generally those where the head and face have been effected, and where the last scene is characterized by coma. In these, he usually found much sanguineous congestion in the different tissues, from the skin to the brain — serous infiltration of the loose cellular substance under the scalp, and sometimes sero-purulent fluid — pericranium vascular and thickened — dura mater vascular — arachnoid sac containing a serous fluid — white or milky appearance of this membrane between the convolutions of the brain, with abundant subarachnoid effusion into the cellular tissue of the pia mater — sinuses, cerebral veins, jugulars, and right side of the heart much congested — cerebral substance firmer or softer than natural, showing numerous bloody dots.

In most cases of protracted erysipelas, inflammation of different portions of the gastro-pulmonary mucous membranes was found — especially of the stomach, bowels, and bronchiæ — the inflammation being most intense at the bifurcation of the trachea, with frothy, sanguineous effusion into the smaller ramifications. Gastritis was indicated by epigastric tenderness, vomiting, ardent thirst, loaded tongue, dry, red, and scabrous near the apex — rapid pulse, etc., the strength being very variable. Muco-enteritis was known by abdominal tenderness, of variable extent — tympanitic distention, diarrhœa, the pulse frequent but little disturbed, and the alvine discharges being mucous and gelatinous, with blood occasionally. When the disease spread to the large intestines, there were dysenteric symptoms.

Metastasis of erysipelas is of rare occurrence, but may take place. The author gives a case where erysipelas of the face suddenly disappeared, and was instantly succeeded by acute brochitis, which quickly destroyed life. We have seen some instances of this kind; but more where the external erysipelas suddenly extends to the membranes of brain, without entirely leaving its original seat in the skin of the face or head.

Our author could not see any proofs of contagion in the present epidemic erysipelas; but, from what he had seen in other years, he has no doubt that it is occasionally contagious, both in and out of hospitals. A letter from Dr. Brereton to the author corroborates this opinion, by his experience in the temporary fever and dysentery hospital. We think that few hospital surgeons or physicians can doubt the occasional contagiousness of erysipelas.

"The treatment adopted in the first class of cases, was general or local bleeding, frequently both were employed; incisions were made when there was much tension, heat, and throbbing: calomel, followed by some of the neutral salts, when the stomach was irritable, purgative enemata, and saline effervescing draughts. If the disease did not yield, and symptoms of inflammation of the internal organs manifested themselves, calomel in doses of two or three grains, combined with small doses of opium, was exhibited every fourth or sixth hour, until the mouth was decidedly affected: and cases threatening a fatal termination, when once ptyalism was effected speedily ended satisfactorily. The mercurial affection of the mouth was in general easily controlled by a gargle of the solution of the chloride of lime or soda, with syrup and water; or by the free application of a lotion of nitrate of silver, twenty or thirty grains to the ounce. The vomiting (although in general sympathetic, in some cases obviously depended upon gastritis) was combated by leeching and blistering the epigastrium, and by the exhibition of calomel and opium, with abstinence from all food; drink in sips merely was allowed.

In traumatic erysipelas, emollient poultices and fomentations were employed; some were successfully treated with cloths dipped in cold water, and frequently renewed, or covered over with oiled silk to prevent evaporation: if the inflammation spread, nitrate of silver, in solution, or blisters were employed to arrest or extinguish it. In the second class of cases, general bleeding was inadmissible; leeches, blistering, or the nitrate of silver lotion were generally found sufficient to check the spreading inflammation. Internally, saline purgatives, with small doses of tartarized antimony, or, if the stomach was irritable, blue-pill, followed by saline aperients, and afterwards quinine in small doses, was employed; whenever lesion of the vital organs was threatened, mercury was steadily given to affect the system, at the same time supporting the strength by tonics and stimulants. In the third class of cases, it was necessary to prevent sinking by the early and liberal use of wine or porter, beef-tea, quinine, carbonate of ammonia, and opium; the latter was often necessary to check diarrhœa, but was contra-indicated when there was much cerebral or pulmonary congestion; it was then necessary to excite powerful and extensive counter-irritation, and to stimulate by sinapisms or blisters."

In respect to the local treatment of phlegmonoid erysipelas, every practical surgeon is now aware of the importance of early and free incisions, which speedily arrest the progress of the inflammation, give great relief to the patient, and prevent the sloughing of the fibrous and other tissues, as well as purulent infiltration of the cellular membrane. Puncturing is a bad substitute for incision, and the depth should be in proportion to the extent to which the inflammation has penetrated. In the great majority of cases, it will be unnecessary to go deeper than the cellular membrane. The bleeding is generally profuse, and should be watched, especially in people of intemperate habits or bro-

ken-down constitutions. "When (says our author) we observe the rapidity with which the blood flows, it appears pretty evident that there is no stagnation of blood in the inflamed capillaries." To us it appears just the reverse. The greater the engorgement and stagnation, the more rapid the efflux from the vessels when a channel is opened "Qua data porta ruit"—like pent-up winds in the Eolian mountains. Where the disease has been neglected till sloughing occurs, lint, dipped in spirits of turpentine, or in gum elemi and turpentine, should be applied to the incisions, and the whole covered with an emollient poultice.

"Other local applications will also be found of much service in expediting the separation of sloughs and the processes of reparation, as equal parts of castor oil and balsam of copaiba, the Peruvian balsam, or one part of the solution of the chloride of lime or of soda to six or eight parts of water."

When acute erysipelas is limited to the skin, our author recommends leeches. Dupuytren employs blisters. It is often necessary to exhibit tonics to support the strength, and rouse the depressed vital powers. Blisters have been employed with much benefit by our author.

"The local application of nitrate of silver, either in substance or in strong solution, so recommended by Mr. Higginbotham, and by others, has been fully tried by the writer in very many cases. It should be applied not only to the inflamed parts, but also to the neighboring integuments; it should produce vesication, or it is of little service; the smarting from the application lasts but a short time, and is soon followed by decided relief. On the next day, there is generally much diminution of the swelling, the blackened cuticle is much wrinkled, desquamates in a few days; it aggravates the symptoms in phlegmonoid erysipelas, and also occasionally in the superficial form in very irritable habits. Some prefer this application to blisters, which, however, will often be found to succeed when the former has failed. Many object to these plans of treatment, but every practical man must be aware of the urgent necessity of arresting the progress of erysipelas, particularly when it affects the head and face, as an inflammatory state of the brain and its envelopes, accompanied by delirium, and ending in coma, may occur very early if the erysipelas becomes extended.

Lately, I have tried the plan of mercurial inunction, as recommended in the Lancet of July 14th, 1832, page 480, and of September, page 739, and upon the whole am led to consider that it is a most valuable application in this disease. To ascertain as much as was possible, the value of this mode of treatment, it has been employed nearly to the exclusion of other remedies, the bowels being merely regulated, and the diet attended to. In two cases where there was much sinking, tonics and stimulants were combined; in most of the cases, mercury applied in this manner affected the mouth. Understanding that this plan had been used in Mercer's hospital, I applied to Mr. Reid for information, and was favored with the following communication:—

'*York-street, Thursday, June 19th*, 1834.

I lose no time in giving you, from memory, the experience I have of the treatment of erysipelas by mercurial inunction in Mercer's Hospital. I have witnessed the practice both in the idiopathic form, and

in the erysipelas consequent to wounds, etc.; it has been used in both species in the head, and also where the extremities have been the seat of the complaint. I think it is more than two years since this practice was introduced amongst us, and was suggested by the cases related in the periodicals, of its success in the hospitals of Paris. It certainly would appear to me from a number of instances, to have considerable power in limiting the extent, and generally checking the progress of the disorder; two, three or four applications have usually sufficed, but the indications of medical treatment have been at the same time followed up. It has been remarked, that no case with us has died, on whom the practice was tried, and that if not in all, in the greatest number of instances, the patients were salivated; from this it would appear, that the absorbents in the diseased surfaces possessed an increased activity. We have now the case of an old man treated by inunction, admitted last Sunday; the erysipelas has disappeared, and the mercurial affection of the mouth is the principal cause of his present illness. This was a very unfavorable case; he received a contused scratch on the forehead a few days prior, to admission; the face, scalp, ears, throat and neck were much tumefied on his admission, and the right arm, from the wrist to above the elbow, similarly affected, though there was no local injury of the limb.'

Many cases are detailed, illustrating the varieties of erysipelas mentioned in this paper; but these we need not analyze. The whole paper is exceedingly creditable to Dr. M'Dowel—and to Dublin surgery in general.—*Medico-Chir. Rev. Jan.* 1835.

10. *Anatomico-Pathological Researches on the Pneumo-Gastric Nerve.* By J. T. H. Albers, of Bonn. *With Observations on Diseases of that Nerve.* By Dr. Hankel.—The state of integrity or disease of the pneumo-gastric nerve has, by reason of the important functions it presides over, attracted much of the attention of the more modern pathologists. In all the post mortem examinations that came before him for nine years, Dr. Albers has never omitted to take notice of the state of this nerve. In the treatise before us, he mentions only those diseases in which the nerve had been most frequently involved.

In the autopsies of 47 persons who had died of hooping cough (some in the second, but most in the first stage of the disease,) he examined both pneumo-gastric nerves in each subject, from their origin to the diaphragm. In 43 there was no change in volume, color, or consistence. Of the 4 others, who were scrofulous and lymphatic, the nerve of the left side was found in one slightly red, and that of the right side of the same color in the three others. This redness was similar to that of the par vagum, in subjects victims to typhus fever, and was always on the side on which the patient commonly lay.

In seven cases of dothinenterite, the right pneumo-gastric was found red in two instances, the left once. This redness affected rather the tissue of the neurilema than the capillaries of the nerve. It disappeared by leaving the nerve some hours in cold water.

In the case of a robust man, æt. 27, who had been attacked in July with dyspnœa, anxiety, delirium, tetanus, and death, in the course of twelve hours, there was nothing presented itself at the dissection but redness and softening of the cervical portion of the pneumo-gastric nerve. It did not lose its color by immersion in cold water, but by exceedingly slow degrees, and then was of a yellowish white. No doubt

the color and congestion may be produced on the dead body, by keeping the neck down and the head up, but in such a case the color will be removed by cold water, and the nerve regain its original hue; but this did not occur in the case just quoted.

In fifteen subjects who died of tubercular phthisis, the par vagum was found developed in a remarkable manner; the right was much larger than the left, and in a more palpable degree than is found in the healthy state. This development of the nerve in phthisis is not rare; it has been observed by Swan and Descot.

In two cases of cancer of the æsophagus, the recurrent nerve was entirely destroyed by suppuration; in another case of perforation of the trachea and œsophagus, the vagus was partially destroyed, as was the recurrent.

In a case of medullary cancer of the mediastinum compressing the trachea and œsophagus, the nerve was developed so as to form a little tumor. The cancerous tumor surrounded the nerve. On cutting into its neurilema, there was found a tumor containing a substance similar to the cancerous one.

In a patient who died of intermittent croup, there were found tubercles in the left lung, tuberculous development of the cervical and bronchial ganglions, and intimate union of the pneumo-gastric of the right side with these ganglions. From these facts, Dr. Hankel attributes the attack of croup to the irrigation produced by the softening of these glands, and the death of the patient to the paralysis of the pneumo-gastric nerve. He is also of opinion that many chronic affections of the chest are owing to organic alterations, tumors, etc. which compress and irritate the par vagum; and that if we find disease in the lung, we too often carelessly omit the minute examination of this nerve.

M. Andral relates a case, in the Nouvelle Bibliotheque, remarkable for its anatomical alterations. The patient was a young man of 24 years old, presenting the following symptoms: swollen countenance; œdema of the eyelids and lower extremities; respiration short, confined, and depending so much on the pectoral muscles, that the lungs seemed paralyzed; inability to remain in the horizontal position; lips and alæ nasi blue; the stethoscope indicated no disease of the heart. Death succeeded suddenly to a fit of dyspnœa. On the examination after death, a portion of the par vagum was found enveloped in tuberculous glands, below which the substance of the nerve was in a state of cartilaginous induration.* — *Ibid.*

11. *Large Doses of the Tartrate of Antimony, after severe wounds and other injuries.* — M. Franc, in his prize memoir, has brought together a multitude of cases of severe injury, to demonstrate the salutary effects of this very powerful remedy. The cases have been drawn chiefly from the cliniques of MM. Delpech and Lallemand, in the Montpellier hospitals, and are valuable alike for the accuracy of their histories and the results of their treatment. The medicine was usually given in full doses — eight or twelve grains being dissolved in water, and a fourth part being given every half hour, till the muscular energy and the arterial and nervous excitement were subdued; and then smaller doses were continued, at great intervals, to keep up the contra-stimulant effects. Several cases of simple and compound dislocations,

*Dublin Journal, Nov. 1834.

in which the reduction was effected with unusual facility, after the exhibition of the tartrate, are mentioned, and, indeed, it was in this class of accidents, and in injuries of the head, that the good effects of the antimonial treatment are chiefly insisted upon. In almost every example, the inflammatory and nervous symptoms were prevented by the timely employment of the tartrate, either with or without the previous abstraction of blood; and even when a train of distressing symptoms had set in before the patient applied for assistance, the relief was uniform and most striking, as soon as the "tolerance" was once fairly established. It is to be observed, however, that, on the whole, this treatment is much more effectual as a preventive than as a curative means.

M. Franc has done a service to his professional brethren, by collecting and arranging the materials of his memoir, for, although the treatment is neither novel nor unknown, we believe that it is not quite so extensively adopted as it ought to be. Many a pound of blood might be saved, if the antimonial anti-phlogistic was duly appreciated on all occasions. — *D'Emploi du Eartre, etc. Montpellier*, 1834. — *Ibid.*

12. *Endermic use of Digitalis in Dropsy.* — The narrator of the following cases assures the profession, that he has been in the habit of employing digitalis, in the endermic method, for the last 20 years, with the most gratifying success.

Case 1. — *Anasarca and Ascites — Frictions on the Abdomen with fresh herb — Cure.*

A countryman became the subject of dropsical effusion into the abdomen and subcutaneous cellular membrane, on the disappearance of a "dartrous" affection of the skin with which he had been troubled for some time. The usual diuretic remedies having been tried without effect, the physician had recommended that the limbs should be scarified, and that paracentesis abdominis should be performed: but fortunately, having heard of the good effects of digitalis, used endermically, he resolved to make a trial of the remedy. The fresh herb was well beaten, and blended with some gastric juice, and this mixture was rubbed powerfully on the abdomen. By the fourth friction, the urine had begun to flow so very abundantly, that the patient, fatigued with rising from bed every minute, "prit le parti s'assooir sur le bord du lit, de mettre les pieds sur des chaises, une chaudron a terre." In the course of one night, the abdomen had greatly diminished in size; the diuresis was kept up, though not to the same extent, for several days, and, within ten days, the patient was completely relieved of every dropsical symptom.

Case 2. — *Anasarca after Scarlatina — Frictions with the Tincture — Cure.*

A child five years of age, while recovering from an attack of scarlatina, became affected with ascites. Frictions were ordered to be made on the abdomen, and inside of the thighs, three times a day, with half an ounce of the tincture of digitalis. In three days the flow of urine had greatly increased, and the dropsical effusion was very visibly diminished; the frictions were then only used twice a day, and this treatment continued for about a week — the cure was complete.

Case 3.—*Ascites—Frictions with the Tincture—Cure.*

A laboring man, much addicted to the use of spirits, consulted M. Chretien in consequence of dropsy of the belly, under which he had labored for some time. No internal medicines were prescribed, and the only remedy was the rubbing in, three times a day, of half an ounce of the tincture of digitalis on the abdomen and on the inside of the thighs. At the same time, the patient was recommended to abandon the use of ardent spirits. The quantity of the tincture was gradually increased to two ounces per diem. The abdominal effusion very speedily began to diminish, and at the end of a fortnight, was quite absorbed.

Twenty ounces, in all, of the tincture were used.

Case 4.—*General Dropsy—Frictions with the Tincture in conjunction with internal remedies—Cure.*

Dr. Chretien was called to a man, whom he found in so advanced a state of general dropsy, that he considered that it would not be safe to have recourse at once to the digitalis. He ordered a stomachic strengthening wine, and small doses of subcarbonate of iron, with infusion of rhubarb (a combination which, the Doctor tells us, he very highly recommends in debilitated states of the system.) In the present case, however, no benefit was derived from its use, and frictions with the tincture of digitalis were accordingly commenced, in conjunction with the above internal remedies. In the course of a few days, the alvine and urinary secretions were much increased—the breathing, which had hitherto been greatly distressed, was easier, and the distention of the abdomen was very sensibly diminished; the anasarca of the extremities and of the scrotum was still very considerable.

In order to ascertain whether the cure would proceed without the internal means being adopted, they were discontinued for a few days; but, as the state of the patient became decidedly worse, recourse was had to the infusion of rhubarb, with what the French call "safren aperitif de Mars." It required perseverance in the treatment which we have explained, for nearly four months, to effect the perfect recovery of this patient.

Case 5.—*Ascites—Internal and external use of Digitalis—Cure.*

A woman, who had labored for some years under cough and dyspnœa, become dropsical; the urinary secretion was remarkably deficient, scarcely more than a wine-glassful being discharged in twenty-four hours.

Pills, consisting of digitalis and of assafœtida, were ordered to be taken three times a day, and the tincture of digitalis was to be well rubbed in upon the abdomen. In the course of a few days after beginning the use of these remedies. the flow of the urine was so abundant, that the patient was obliged to get out of bed almost every hour; the general health became also, at the same time, much better, and, in the course of a month, every unpleasant symptom was entirely removed.

Observations. The tincture which was employed in the preceding cases was stronger than that in common use; it was prepared by digesting an ounce of the leaves of the herb in three ounces of alcohol. If the experience of other practitioners should confirm that of Dr. Chretien, the endermic method of exhibiting digitalis will be a most valuable improvement in the mode of treating many cases of dropsy,

The reports of his cases are certainly far too brief, and too carelessly drawn out, to satisfy the mind of the critical reader. No allusion is made to the state of the pulse during the continuance of the remedy; but we are led to infer, from the subsequent remarks of the author, that it was always lowered, when administered internally, and that no sensible effect was produced upon it by the external use of the medicine. It has been maintained by Broussais, and other physicians of the physiological school, that the direct and normal action of digitalis is a sedative to the circulatory system, and that, whenever the pulse becomes quickened, or indeed, is not reduced by its use, we may conclude that some gastric irritation exists in our patient; in order that the drug may be able to exert its natural action, the stomach must be in a tranquil state. The experiments which Dr. W. Hutchinson instituted upon himself are the most satisfactory and conclusive, as to the operation of digitalis on the human body, and they certainly confirm the doctrine of Broussais; the pulse was gradually more and more lowered as the medicine was continued, and its dose increased, until it beat only 28 times in the minute; and a gastro-intestinal irritation, accompanied with extreme exhaustion, having then come on, the contractions of the heart became strong and vigorous, and were upwards of a hundred. It is to be remembered, that this experiment was repeated, and the same results exactly were obtained as on the first occasion.—*Revue Medicale.—Ibid.*

13. *Detection of the Matter of Miasmata in the Air.*—In a memoir lately read by M. Boussingault, at the Academy of Sciences, this most curious subject of meteorological enquiry is very ingeniously treated. It is well known that miasmata are almost always generated in places where dead vegetable matter is exposed to the conjoined influence of heat and of moisture, and hence, that they are of frequent and perhaps constant occurrence in warm marshy districts, especially if there be any admixture of fresh and salt waters, or if the ground has recently been turned up. The observations of all enquirers agree in representing the evening, soon after the setting of the sun, as the period at which the miasmatic influence is most actively pernicious, and in showing that the deleterious atmosphere rests chiefly in the valleys and low grounds, while the more elevated positions are often quite exempt from its agency. Many years ago Moscate was led, by attending to these circumstances, to believe that perhaps the matter of miasmata might be discovered by collecting and condensing the dew, and submitting it to chemical analysis. His experiments were performed in the rice-grounds of Tuscany; and the results of these were, that the water so treated did very often exhibit flocculi, which had the properties of an animalised substance. Subsequently M. Delille announced that the water which he collected by condensation from the atmosphere in the marshes of Languedoc readily putrefied, and exhibited then flocculi of a highly azotised matter, which, on the addition of nitrate of silver, afforded a purple precipitate.

In 1819, M. Boussingault observed, that sulphuric acid placed in the neighborhood of pools, in which hemp was steeping, quickly assumed a dark color, whereas, at a greater distance from these foci of putrefaction, the change took place much more slowly. At the period of this observation, a pestilential fever was ravaging the district of Ain, where M. B. was residing; and he was hence led to conjecture that

the two co-incident phenomena might be owing to the operation of the same agent, and that this agent, from its blackening sulphuric acid, no doubt, contained some carbonaceous matter.

When M. B. visited South America, he repeated these experiments in many places, which were notorious for their pestiferous miasms; but in these warm regions, the atmosphere so teems with insects, that the change in the color of the acid might be supposed to be owing, in part at least, to some of these having fallen into, and being charred by, it. His apparatus, therefore, required some improvement, to guard against this objection, and he acquaints us, that when he was residing at Carthagena, he adopted the following precautions:—

"Soon after sunset," says he, "I placed two watch-glasses on a table in the middle of a marshy plain: in one of these glasses I put a few drops of warm water, for the purpose of moistening its surface, and imparting to it a temperature somewhat above that of the atmosphere; the cold glass was speedily covered with dew: but almost none was condensed on the other one. A drop of strong sulphuric acid was then added to both glasses, and when their contents were slowly evaporated to dryness by the heat of a lamp, it was invariably found that a trace of carbonaceous matter adhered to that glass in which the dew had been deposited, while none could be seen in the other. This mode of experimenting possessed the advantage of requiring but little time for its performance, and if any insect happened to fall into either glass, it could be at once removed with a needle.

By using two glasses, the objection that any particles of dust floating in the atmosphere might have been entangled in the fluids was guarded against; for if the carbonization depended upon this cause, it is evident that it must have affected both glasses equally."

The above-mentioned experiment was repeated by M. B. for several evenings, and uniformly the same results were obtained.—*Ibid.*

14. *Cases of Fracture of the Carpal Extremity of the Radius, with Practical remarks on that Accident.*

Case 1. *Fracture attended with Displacement radiad—Reduction on the 20th day.*

A lady, 69 years of age, fell with violence on the hand: the true nature of the accident was not recognised; it was believed to be only a sprain. As the swelling subsided the deformity of the wrist became more and more conspicuous, and the movements of the joint still more impeded. Wheh she consulted Dupuytren at the end of the third week, the following was the state of the case;—the hand was strongly drawn outwards, or in the direction of abduction: a depression might be felt at the inferior extremity of the radius: the acts of pronation and supination were scarcely possible, and when attempted, caused extreme pain.

The replacement of the fracture was effected by an assistant grasping the forearm and making counter-extension, while M. D. drew the hand powerfully inwards, or in the line of adduction: by degrees the depression became less and less perceptible, and when the reduction was complete, the joint was well secured by the application of splints, which were kept on for ten days, and then re-applied for other three weeks. The cure was most satisfactory, no deformity remaining.

CASE 2. *Fracture in a Child — Accident mistaken — Reduction 29 days afterwards.*

This patient received the injury by falling from a tree; the surgeon under whose care he was placed, thought it merely a severe bruise; the deformity became more apparent as the swelling declined. The fore-arm being secured by an assistant, M. Dupuytren was obliged to continue his exertions for a length of time before the depression between the fractured ends of the radius was effaced. At length however this was effected, and splints were applied: the application of these was renewed every ten days for three weeks. The cure was complete.

CASE 3. *Circumstances similar to those in the preceding case.*

A boy, 13 years old, in consequence of falling from a tree upon his right hand, fractured the extremity of the radius; but this accident was not detected till the beginning of the fourth week after its occurrence. The reduction was quite as difficult as in the preceding case, and fortunately the event was satisfactory, the boy recovering with the perfect use of the hand.

CASE 4. *Fracture — Nature of the accident mistaken — False joint formed.*

A middle-aged man came to the Hotel Dieu to consult M. Dupuytren respecting an injury of his wrist, which he had been told, was dislocated backwards. The accident had happened three weeks before, and had been caused by falling on his hand. Several attempts had been made to reduce this supposed dislocation, but the deformity had always returned as soon as the extension was withdrawn.

Dupuytren at once recognised the nature of the injury. The radius had been broken immediately above its styloid process. The motions of the wrist and fingers were extremely painful, and indeed scarcely possible; but it was observed that the broken ends of the bone were freely moveable upon each other, and the Baron therefore inferred that a pulse, or secondary articulation had begun to be formed, no doubt in consequence of the repeated and violent efforts which had been made to reduce the deformity. He advised the patient to go into the Hospital as an in-patient, but this was declined, so that the event of this case is not known.

Reflections on the preceding Cases. It is the opinion of Dupuytren and some other excellent surgeons, that genuine simple dislocation of the wrist-joint very rarely, or perhaps never takes place, and that all the cases recorded as such have been so many examples of erroneous diagnosis. We do not at present include those cases, in which the joint, or its capsule have become diseased, as from white-swelling dropsy, etc. Perhaps under these circumstances, the extremity of the radius may become fairly displaced from the convex arch of the carpal bones; but such an accident must be very rare; all that we insist upon is, that it is seldom or never caused by outward violence. The injuries which have been mistaken for it, are dislocation of the ulna, dislocation of some of the carpal bones, fracture of the radius, or of the ulna, or of both bones, and lastly, separation of their epiphyses: by far the most frequent of these, is fracture of the carpal end of the radius. If these sentiments be correct, how countless must have been the in-

stances of mala praxis. The Italian surgeon Paletta, arrived at the same conclusion, and nearly about the same period (1820) as the celebrated Frenchman; the words of the former are—"Suspicari liceat manum e loco penitus promoveri non posse." And again—"Ut diceres cubitum quasi ad id intentum esse, ne manus e sco nixu excidat."

The case recently published by M. Forget, in the Trans. Med. de Paris, as one of dislocation of the radius, we have no hesitation in pronouncing to have been rather one of dislocation of the ulna, and we have the authority of Sir A. Cooper to show that such a mistake may not be uncommon: he says—"Luxation of the ulna at the first sight exhibits the symptoms of dislocation of the hand backwards." Certainly, in M. Forget's case, the symptoms reported do not warrant the conclusion which the author has come to, respecting the nature of the injury.

When in young children the extremity of the radius is broken, or what is more common, when the epiphysis is detached, the diagnosis is often still more obscure, than when the accident occurs in adults; the crepitation is much less distinct, and sometimes indeed scarcely perceptible, in consequence, no doubt, of the less density of the bone, of the greater quantity of blood effused between its extremities and of the periosteum, and indeed of many of the osseous fibres too, having not been lacerated; hence the lateral displacement of the fractured ends is usually less considerable, and hence too that degree of curvature which the wrist sometimes assumes in this accident, when it occurs in children. This last mentioned phenomenon is particularly worthy of attention, because, from not being well understood, it has given rise to a most serious practical error. It has been supposed that the carpal extremities of the bones of the fore-arm may, in young children become suddenly bent or curved without any fracture, or displacement of the epiphysis, by falling with force from a height on the hands: this accident has been denominated "primitive and accidental curvature of the bones of the fore-arm." The prognosis and treatment are thus described in a treatise, by M. Thierry, in a memoir published in 1808.

"Le mal guerit ordinairement en douze ou quinze jours, s'il n'est pas meconnu; mais, si l'on e'y apporte pas les soins convenables, l'avant bras reste difforme, s'atrophie, et le malade ne peut presque plus s'en servir."

"*Traitement.* Extensions tres fortes, mais graduees, et cooptation avec les paumes des mains pour redresser la courbure saillante."

We need not say that, however correct the prognosis and mode of treatment may be described, the diagnosis is quite at fault.

The following case, extracted from the late Professor Wilson's treatise on the Bones and Joints, is admirably illustrative of the truth of our remarks.

"A child, three years old, fell from a considerable height upon the pavement: the head was seriously injured, and the right fore-arm was bent nearly to a right angle. The child died soon after the accident; and on dissection it was found that the curvature of the fore-arm was the effect of a fracture of the bones; the fracture however did not extend through the entire thickness of the bones, the fibres on the posterior surface being not divided, and the periosteum moreover not being lacerated."

From the investigation of the two most celebrated surgeons of the present day, Sir A. Cooper and Baron Dupuytren, it appears, that there are three sorts of fracture of the carpal extremity; that the bone may be broken either right across, or in an oblique direction into the joint of the wrist, or into several pieces, constituting a comminuted fracture.

Now it is chiefly these two last-mentioned sorts, that have been so generally mistaken for dislocation of the wrist; and the error of diagnosis arises in this way; the wrist-joint, having lost the support and stability afforded by the articulating extremity of the radius, is drawn, by the action of the muscles of the fore-arm, from its normal direction, and becomes inclined either to one side or to the other, or forwards or backwards, dragging the fractured portion of the radius with it, and causing it to project, as if it were dislocated: the circumstances too of the absence of crepitation, and of the facility with which the deformity may be removed for the time by extension, tend to confirm the error of diagnosis. It is to be hoped that this practical error may be henceforth avoided by surgeons, as well for their own credit, as for the successful recovery of their patients; for it is to be remembered, that not a few awkwardly anchylosed joints have been the result of what have been supposed to have been cases of dislocated wrist. Sir A. Cooper judiciously recommends that the splints and bandages should be removed at the end of the third or fourth week, according to circumstances, for the purpose of accustoming the joint to gentle movements. Even under favorable circumstances the joint sometimes does not recover its free motion for many months: this inconvenience is most frequent, as we may suppose, after an oblique or comminuted fracture of the radius.—*Archives Generales, Aout,* 1834.—*Ibid.*

15. *Professor Albers on Inflammation of the Spinal Dura Mater.*—The pathognomonic symptoms of this affection are, according to our author's experience, acute pain, stretching to, and felt chiefly in the lower part of the trunk and inferior extremities; convulsive movements of different parts, accompanied with a trembling or tremulous agitation; difficulty in expelling the urinary and alvine discharges; and lastly, a feeling of tightness or constriction round some part of the body. We shall briefly allude to each of these sets of symptoms in detail.

1. The acute pain in the parts situated below the seat of the inflammation was observed in the examples reported by M. Funk, as well as in those observed by Professor Albers. This symptom has been repeatedly noticed in cases of tetanus. The pain is usually accompanied with a sense of pricking and tearing; and these distressing feelings are in most instances referred to the epigastrium, hips and thighs. In very severe cases so acutely sensitive may be certain parts that even the slightest touch causes excruciating pain and cramps. Now this symptom, or rather chain of symptoms, is not observed, when the arachnoid and pia mater, or when the substance of the medulla itself is affected; under these circumstances, after the pain and convulsive movements have continued for some time, a paralytic weakness usually supervenes. On the contrary, paralysis is certainly not a common result or effect of inflammation of the dura mater, unless the disease has involved the parts situated within its sheath.

2. *Convulsive movements.* When the cervical portion of the spinal dura mater is affected, the muscles of the face and neck are usually drawn into irregular contractions, along with those of the chest and abdomen. The upper extremities are affected more tardily, and sometimes not at all, until a few days before death. It is not, however, unfrequent that severe and irregularly returning pains are felt from the shoulders down the arms; certainly the upper extremities are more generally affected than the lower, when the disease is situated in the cervical region. When the whole extent of the cervical section of the medulla is inflamed, the upper extremities are almost certainly affected; but when the inflammation is limited to its inferior portion, they may escape altogether, or exhibit only a trembling movement or agitation, while the lower limbs are all the time contracted with tetanic spasms. Sometimes the arms are spasmodically affected, while the thighs and legs are paralysed. Under these circumstances, we may expect to find on dissection an effusion of reddish serum within the sheath of the dura mater, at its lower part. As long as the quantity of this serum is small, it may act as an irritant on the cauda equina, and may thus cause convulsions of the inferior extremities; but when it becomes more abundant, it induces, in consequence of the compression, partial or total paralysis.

Professor A. remarks, that the tetanic convulsions which attend inflammation of the dura mater are also always of the "tonic," and very rarely of the "clonic" kind. The cause of the persistance and intensity of the spasm is no doubt attributable to the irritation, which the diseased envelope exercises on the contained medulla, being constant and not remitting. "Now, this is not the case when the medulla itself or its immediate coverings are affected. The state of high excitement lasts but for a short time; hence the violent convulsions are either from the exhaustion of the nervous energy, or from the compression on the nervous mass, especially followed by paralytic weakness. On the other hand, this state of paralysis seldom occurs in inflammation of the dura mater, except for a few hours before death."

3. *Tremulous agitation of different parts of the Body.* This symptom is usually most conspicuous in the early stages of the disease when the patient attempts to walk. He finds that he cannot keep his head steady for a moment, and that his arms, body and, and legs are in a constant tremor. This is one sort of the "paralysis tremens" of Dr. Cooke. It may be observed, that the involuntary action of the muscles we are now alluding to, always ceases when the patient is in the horizontal position. As the disease lasts, this symptom becomes less and less distinctly marked, and either disappears altogether, when a favorable termination may be anticipated, or it is succeded by a tetanic stiffness or contraction of the limbs. As soon as tetanus begins to appear, the tremulous agitation ceases.

4. *Difficulty in expelling the Urinary and Alvine Evacuation.* In general, the paralytic affections of the bladder precedes that of the rectum; and, indeed, the latter viscus is sometimes but little affected till within a short time before death. The true nature of the urinary local distress is not unfrequently mistaken at first, and it is only when the bladder has become enormously distended, that the practitioner is made aware of the existing evil.

5. *The feeling of Constriction round the body.* When the cervical portion of the medulla is inflamed, the sense of constriction is usually experienced round the lower part of the thorax, extending from the dorsal vertebræ to the epigastric region. When the lower part of the dorsal, or when the lumbar division is the seat of the disease, this symptom is remarkable, chiefly in a line running almost parallel to the anterior and superior crista of the os ilii. The sense of constriction is not unfrequently accompanied with positive pain; it is always an unfavorable sign, as it indicates the intensity of the inflammatory action. When once established, it is, even under the most fortunate circumstances, very obstinate of removal.

In concluding these remarks on inflammation of the spinal dura mater, we may state, that the functions and faculties of the brain may remain uninjured, under the most serious disease of the medulla spinalis.—*Graefe und Walther's Journal fur Chirurgie, etc.*—*Ibid.*

16. *On the Treatment of Syphilis without Mercury.*—That men should disagree in matters of opinion, in references drawn from facts of premises, is natural and consistent with what might be expected. But that they should differ on the facts themselves, that one man should term an object white, and another affirm it to be obviously black, is a monstrous and seemingly incredible opposition. Impossible as it might appear, the contradiction is too common to be doubted. Where interest sways, or passion blinds, the philosopher may condescend to explain and to excuse. But where these human frailties do not conspire to distort the observation and to warp the judgment, charity herself finds it difficult to offer a favorable solution of the glaring inconsistency.

This general remark may fairly spring from a survey of the statements which amaze and confound the critic and the profession, with respect to the treatment of syphilitic symptoms. One set of observers assert that syphilis requires mercury for its removal;—the other deny that mercury is necessary, nay, they even affirm that the disease is better cured without it. Both parties found their opinions upon observation—upon *facts*. Yet some of those facts must surely lie, for Nature is true to herself. Who shall determine on which side truth is to be found?

We have had much experience in venereal maladies—have made some experiments and witnessed more. Without attempting to arrogate to ourselves the office of the umpire, we may candidly state in general terms the results of the observations we have made. Our readers will attach what importance they think fit to our conclusions, for in litigated questions of this description something must depend upon the weight of character.

We should premise that this article is based upon two papers; one by Dr. Williams, of St. Thomas's Hospital—the other by Dr. Green of Bristol. The first is contained in the Medical Gazette;* the second will be found in the second volume of the Provincial Medical Transactions.

The great point d'appui of the anti-mercurialists is the army medical reports, those reports display a formidable battery, from which the mercurial practice is assailed. Perhaps the most forcible statements in those documents, are contained in the following extract from the paper of Dr. Green.

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*Medical Gazette, April 12th, 1834.

"The reports I have next to call attention to, were circulated from the army Medical Department, in April, 1819, and will be found in Dr. Hennen's work; they state as follows—'That since Dec. 1816, to Dec. 1818, there appear to have been treated, for primary venereal ulcerations on the penis, (including not only the more simple sores, but also regular proportion of those with the most marked characters of syphilitic chancre, as described by Hunter and other writers) 1940 cases.' 'That of these 1940 cases so treated, 96 have had secondary symptoms of sorts; 'different of these 96 cases of secondary affections, mercury was had recourse to in 12, for various reasons stated in the report. In the 1940 cases of primary symptoms, mercury was used in 65, for reasons also assigned; if we deduct the 65 and 12 cases in which mercury was used, from 1940 reported, 1863 *cases remain completely cured without mercury.* The report goes on to state, 'that the average period required for the cure of primary symptoms without mercury, when bubo did not exist, has been 21 days; with bubo, 45 days.' That the average period for the cure of secondary symptoms, without mercury, has been from 28 to 45 days. '*That every man treated without mercury, has been fit for immediate military duty on dismissal from the hospital.*' In the same period, 2327 cases of primary symptoms were treated with mercury; secondary symptoms occurred in 51 of them. The report states, that in the majority of these instances, there were good grounds for believing that *the constitutional symptoms 'were more severe and more intractable than when mercury had not been used for the primary sores.'* Two more thus treated *with mercury* were discharged the service, on account of the injury their constitutions sustained from the treatment. The average period required for the cure of primary symptoms, without bubo, was 33 days; with bubo 50 days; and for the cure of secondary symptoms, 45 days. '*Here then* we have *a record of* 1833 *cases, of every form and stage of syphilis, cured without mercury;* and in not one instance did any unfavorable results follow the treatment; foul ulcerations, caries of the bone, broken down constitutions, and a loathsome death, were not here to be seen. The evidence thus presented is too strong to be disputed, and, perhaps, could have been collected from no other source than military hospitals, and in no other practice could the consequences of the treatment be better observed, as, of course, the men remain under the personal observation of their surgeons after they are cured. I need hardly say, that the enquiries were conducted with that fair, candid, and impartial spirit, which should ever mark the investigations of men searching for truth; if any triumph did follow their exertions, it was that of truth over error."

When we add to this the result of the experiments of Mr. Rose, we have laid before our readers the leading statements contained in the medical reports of the army—statements to which the anti-mercurialists constantly refer with confidence and truimph—the triumph, as they tell us, of truth over error.

"The late Mr. Rose, surgeon to the Coldstream Guards, first stated to the profession in this country,* the important fact, that all cases of the primary and secondary symptoms of syphilis could be cured without mercury. For a year and three quarters he treated, at the regi-

* "Mr. Furguson had previously stated in the 4th vol. of the Med. Chir. Trans. that the venereal disease was successfully treated in Portugal, without mercury."

mental hospital in London, all cases of venereal diseases occurring in the soldiers of the Coldstream Regiment of Guards, without mercury; he observes,* I 'have certainly succeeded in curing all the ulcers of the parts of generation, which I have met with in that period, with the constitutional symptoms to which they give rise, without the exhibition of mercury.' Mr. Rose treated more than 120 cases in this way, and no unfavorable results whatever followed the practice; he adds,† 'caries of the bone, and some of the least equivocal symptoms did not occur. Constitutional symptoms were, in most instances, mild, and, in some, so slight, that they would have escaped notice unless carefully sought for.' In not one instance was there that uniform progress, from bad to worse, which was considered an essentital characteristic of true syphilis. Mr. Rose's paper is well worthy of attentive perusal, as well on account of the facts it contains as of the spirit of cautious enquiry evinced in it. Mr. Guthrie next published a paper on the same subject; he had treated nearly a hundred cases of primary sores without mercury, and considers it an established fact, that‡ 'every kind of ulcer of the genitals, of whatever form or apppearance, is curable without mercury.' He considers that, in some cases, a gentle course of mercury will expedite the cure, but does not consider it a specific for the venereal disease.

Dr. Green of Bristol, who quotes and who admires the foregoing reports—who endeavors

To swell the triumph and partake the gale,

has his own experience to confirm their accuracy. His modesty induces him to suppose that his testimony is feeble, yet his candor compels him to present it, in the hope and with the object of inducing surgeons to regard the anti-mercurial treatment without distrust.

For the last seven years, he has treated nearly all the cases of venereal that came before him, without mercury. In a few instances, indeed, he has employed this remedy, where the symptoms got into an indolent or chronic state. He "tried the stimulus of mercury" in such cases, precisely as he would have done whether the symptoms were of venereal origin or not, with the view of inducing healthy action in the local disease; or he has given it to alter the secretions from the stomach and bowels, or to improve the general health where it seemed required.

"I have kept an account of 100 cases of the venereal disease, treated by myself, without a particle of mercury used internally or externally. In the selection of these cases, two objects have been kept in view, namely, that the primary sore should, in some degree, possess the characters of the Hunterian chancre, 'a circular, depressed, and sloughy sore, with an indurated base;' and I have preferred taking notes of those cases where patients resided in Bristol, that I might have an opportunity of watching the consequences of the treatment, to ascertain if any symptoms of a contaminated constitution should result from syphilis, cured without its supposed specific."

Our crippled space will permit us to offer no more than a summary of our author's facts—a still more brief account of his opinions.

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* Medico Chirurgical Transactions, vol. viii, p. 355.
† Med. Chir. Trans. vo'. viii. p. 420.
‡ Ibid. p. 571.

And first of his facts.

1. All the primary sores exhibited more or less resemblance to the Hunterian chancre. They were treated with sedative and astringent lotions, or with simple ointment as one or the other best agreed. The average period which they took to heal was a fortnight to a month. In some of the cases, the local inflammation accompanying the sore required local or general blood-letting; in others, thickening and induration remained for some time after the sores were cicatrized, but spontaneously subsided.

2. Of 100 cases of primary venereal sores thus treated, buboes supervened in sixteen. Of these buboes, six suppurated. The buboes which did not suppurate, were removed, on an average, in about six weeks; in two cases, however, a chronic enlargement of the inguinal glands remained for a longer period, one four, and the other seven months; but both of these patients were of decidedly scrofulous habits. The buboes which did suppurate, were healed within two months from their appearance, except one, which remained open four or five months; this patient was also of a scrofulous constitution; ultimately, the whole sixteen cases of bubo were cured.

3. Constitutional affections, of one kind or another, followed in nine cases; these secondary symptoms were, cutaneous eruptions, sore throat, pains in the limbs and periostitis. The affection of the skin assumed varied forms; it was papular in three cases, pustular in two, vesicular in one, vesicular and scaly in two, and in the last it was a mixed form of eruption, papular in the beginning, followed by a general redness, and ending in a scaly condition of the surface. Two of the papular eruptions were so slight, as scarcely to deserve attention. One was a well-marked specimen of "lichen simplex;" it lasted about three weeks. One case of pustular eruption displayed a striking resemblance to small-pox;—in four months it was removed. The two cases of vesicular and scaly eruptions occurred in delicate and strumous persons; one lasted between three and four months—the other nearly seven. The mixed form of eruption was gone in five weeks.

4. Sore throat occurred in four cases; in three it was conjoined with cutaneous eruptions. We will only observe of the ulceration of the throat that it was extensive, superficial, and covered on its surface with a thin layer of adherent lymph.

5. Periostitis occurred in two cases—broadly marked in one, and faintly in the other. In one, the bones of the head were affected; the complaint was obstinate, but yielded at length to counter-irritation. In the other the tibia was the bone attacked; no treatment was required in this case.

6. There was not one instance of iritis.

Dr. Green deems it necessary to mention the unfavorable symptoms that were noticed. They are neither numerous nor grave.

"In one case of tedious cutaneous eruption, the chain of lymphatic glands of the neck became swollen, and they have remained enlarged since. In another case of obstinate scaly and vesicular eruption, the skin remained discolored, in patches, for nearly twelve months."

Such are the facts of Dr. Green. His opinions may be analytically reduced to this:—that it is absurd and false to consider mercury a specific for syphilis. The belief in its specific agency is, he thinks, only worthy of a place in the manual of some Turkish Doctor, or the hoarded secrets of some copper-colored Indian. He denies that mer-

cury has any power whatever over the syphilitic poison itself—a theory, he observes, unsupported by facts, which has never yet been proved, and never will be. Warming as he proceeds, he throws down the guantlet against *all* specifics; "a belief in which is to say the least of it, a very unscientific faith."* To sum up—he conceives that, cæteris paribus, the venereal disease can be better cured without mercury than with it—that worse consequences follow when the latter is employed than when rejected—and, therefore, that its use should in general be abandoned. Yet he owns that it is sometimes beneficial—but *not* as a specific; his hypothesis and facts continue safe, his creed is not alarmed, at exhibiting the mineral, *not* as a specific.

"The cases in which mercury may be employed with advantage, appear to me to be those in which the symptoms get into an indolent state, and become a chronic disease. Here mercury may be of service, if there be nothing in the constitution of the patient to forbid its use. Its chance of doing good in these cases, results not from any specific or antisyphilitic power belonging to the remedy, but from the well known influence mercury possesses of controlling and altering morbid actions, altogether devoid of any specific character; but, if there be any difference between its influence over specific diseases, and those of a different nature, experience tells us it is this, that while mercury alters and subdues simple morbid actions, it alters and sometimes aggravates those of a specific nature, such as the phenomena resulting from the venereal infection."

Dr. Williams comes next upon the stage. If Dr. Green has prepared the bane, Dr. Williams presents the antidote—if the former denounces mercury as a specific—the latter considers its powers undeniable.

His arguments in favor of those powers are brief—they are general deductions, rather than circumstantial statements.

1. Dr. Williams admits, as it is impossible to deny, that syphilitic, that is venereal sores, and, indeed, venereal secondary symptoms, will in certain instances terminate spontaneously. But he contends, that where mercury is not given, the disease is much prolonged, and secondary symptoms are more frequent.

"It is necessary, also, to ensure a favorable result, that the patient should submit to a painfully long confinement to his bed, and not only that he should abstain from every indulgence, but must submit to an exceedingly low or spoon diet. A spontaneous cure, therefore, is a termination little in unison with our habits of active life, and some remedial mode of treatment is not merely desirable but necessary. In the cure, then, of syphilis, mercury in greater, or less doses, and introduced into the system either locally or by the mouth, or by inunction, is unquestionably, according to our present experience, the great, and indeed only specific remedy by which we are enabled to control and subdue the primary action of this baneful poison."

2. The cure of the secondary symptoms Dr. Williams thinks to be a problem. Yet he makes a faint attempt at its solution.

"The problem of the cure of the secondary symptom is not of such

* The Doctor's notions and our's on science may, probably, be widely different. His science may consist in something intellectual, metaphysical, and abstract—our's is the homely induction from fact: his goddess may be throned in the æther or the clouds—our's walks amidst the haunts of men; he may deem it unscientific to believe that sulphur is a specific for the itch—our science is unable to dispute or to contemn the humble truth.

easy solution. It has been affirmed that these symptoms are aggravated wherever mercury has been used for the cure of the primary sores: of this, however, I entertain the strongest doubts; for it is agreed that secondary symptoms much more frequently occur when the primary symptoms have been allowed to terminate spontaneously than when mercury has been used, and yet it seldom happens, when there is so strong a tendency to disease, that such disease, when excited, is mild. It is a fact also, that before mercury was used for the cure of syphilis, it took its name from the more hideous of the forms of its secondary symptoms. In Lisbon also, where mercury is little used for the primary sores, every military surgeon admits that more mutilated faces are to be seen than in any other town of the same size in Europe. But whatever may be the fact, it is certain that the cases of secondary symptoms which present themselves at the London hospitals are of great severity, and show little tendency to a spontaneous cure. On the contrary, the long and extreme sufferings of the patients, and their worn and emaciated frames demand, prompt and immediate relief. In the cure then, of the secondary symptoms mercury and sarsaparilla are the only remedies that at present maintain any character.

The medicinal properties of the latter substance, however, are so little determined—the cases in which it is useful so little agreed on—that Mr. Hunter, and also many most eminent physicians and surgeons, have abandoned it as altogether inefficient; and it is hardly an exaggeration to state, that the majority of the profession, in the present day, rely on mercury as the only remedial agent in all forms of the disease.

If we look, however, to the laws which govern other poisons, we find that their different specific actions are only subdued by many and even opposite remedies; and consequently, we might expect that although mercury might be eminently useful in some stages of syphilis, still, that in combating so multiform a disease, many different modes of treatment would be necessary. In paludal disease, for example, as long as the action of the poison is limited to inducing intermittent fever, unaccompanied by any local disease, quinine is a certain and specific remedy. But no sooner are the secondary affections of that poison established, as inflammation of the liver or spleen, than calomel is the specific medicine; quinine being either unavailing or injurious. An equally remarkable change of treatment is required should the poison of scarlet fever fall upon the larynx or peritoneum, or on the synovial membrane of the joints. It will be plain, therefore, that mercury, the great specific in the primary affections of syphilis, is of doubtful efficacy in its secondary affections; and every practical physician knows how often this powerful remedy totally fails in relieving many of the most distressing forms of the disease."

Such are the arguments adduced by Dr. Williams, in his general support of a mild mercurial practice. The remainder of his paper is occupied with some reflections upon nodes and venereal ulceration of the throat. Our business is at present with the question of exhibiting or withholding mercury for the cure of syphilis. We must, therefore, disregard the observations of the Doctor, which have not particular reference to this subject. Yet we cannot agree with some of his opinions, and his paper may furnish, at a future opportunity, the peg on which to hang some critical remarks.

When we look at the present condition of the argument, we find that it assumes the following aspect. On one side it displayed an alluring and imposing array of facts — cases in the mass of a specious character, which subdue the reasoner by their demonstrative appearance. On the other hand, we discover the majority of the profession, and its experienced portion in particular, clinging, perhaps with prejudice, but certainly with pertinacity, to the doctrine which those facts are calculated to subvert. Cherished errors and prejudices are strong, but truth, after a time, is stronger; and it does appear to offer prima facie evidence in favor of mercury, that the anti-mercurialists so far from gaining ground are daily losing it.

There are reasons for believing *that* a keen examination of the Army Medical Reports would not lead the impartial reasoner to conclusions so unfavorable to the value of mercury, as Dr. Green and others believe; *that* mercury was resorted to in cases which had resisted the non-mercurial treatment; *that* out of a certain number of sores promiscuously taken, many will not be syphilitic at all; *that* if sores be not syphilis, mercury given as a specific would be mischievous, and, consequently the comparison of numbers with numbers treated each way is not a fair one; the point at issue being mercury or no mercury for syphilis only; *that* the experiments were made by men, some, at least, of whom were ill-informed, both of the forms and nature of syphilis, and the proper mode of exhibiting mercury; men with no hospital experience, an imperfect education, and the liabilities to error arising from the enthusiasm excited by the support of a novel doctrine; *that* with all these disadvantages — the application of mercury in cases in which it should not be applied, its exhibition in proper cases in an improper manner, the necessary incompetence of many of the experimenters to conduct such vast and such nice experiments, and all the fallacies which we will not name — with all these disadvantages, the careful consideration of the whole of the reports will still leave the balance in favor of mercury.

Perhaps the investigations of the late Mr. Rose were less likely to terminate in error than those of many of his associates. Those investigations are constantly appealed to as decisive evidence against mercury. Mr. Rose became surgeon to St. George's Hospital, and we can state with confidence, for many gentlemen know the fact, that he *abandoned* in latter life the non-mercurial treatment — that he confessed its inefficacy — and employed the remedy which his statements are frequently brought forward to condemn. We may mention an instance, which came, among others, to our knowledge. A young physician contracted a sore upon the prepuce. He went to Mr. Rose. The latter gentleman merely observed, "I would advise you to take a course of mercury." "Oh! but," said the Doctor, "it can be cured without it." "Never mind that," replied the anti-mercurialist; "if you take my advice you'll take mercury." Mr. Rose was an honorable man, and would never have published what he did not believe to be true. He reluctantly changed his opinions, but he did change them.

Mr. Guthrie is adduced as another authority against the use of mercury. We would ask this question: — *does* Mr. Guthrie now pursue the non-mercurial practice? We should fancy that he does not.

The length to which this article has stretched prevents us from offering many observations arising from our own experience. Yet that experience has not been narrow in the venereal disease. In our next

number we shall make some more extended remarks upon the subject.

The facts which we have witnessed, and the experiments which we have made, have been sufficient to convince us of the utility, nay, necessity, of mercury. Like many others, we were charmed with the plausibility of the Army Medical Reports—we imagined that the time was come when syphilis could be treated safely and judiciously without a course of mercury. We were soon undeceived. The great opportunities afforded for observation and for practice in the wards of the Lock Hospital speedily disclosed to us the important truth, that whatever might be the case with respect to the venereal disease elsewhere, no doubt could be entertained of its being best cured by mercury *there*. We do not disbelieve the army surgeons, we do not dispute the authority of Dr. Green, but we believe the evidence of our own senses, and that evidence is in favor of mercury.

Our observations may be reduced to the following general statements: —*that* sores possessing the character of syphilis, when treated without mercury, are remarkably prone to occasion secondary symptoms—*that* secondary symptoms, treated without mercury, are in general extremely obstinate, and in many cases appear to promise no natural termination—*that*, upon the other hand, the same kind of sores and the same description of secondary symptoms, yield with comparative facility to mercury, judiciously exhibited—*that* some sores require but little mercury, and some probably require none—*that* some symptoms usually reputed secondary, such as rupia, sloughy ulceration of the throat and nodes, are occasionally benefitted, and as often aggravated by the employment of mercurial medicines—and finally, *that* mercury, properly administered, is not only valuable, but, practically speaking, indispensable for lues. Such are the conclusions we have drawn from observation and experience, in the Lock Hospital and out of it. That observation has been minute and diligent, if it has not been successful; and, without attempting to play the braggart, we will say that our experience has not been inconsiderable. We went to the investigation with a bias against mercury; the inquiry has given birth to a conviction for it.

The fact is, that there is much, very much, to be done in the examination of the venereal disease. We possess no really good work upon the subject. Hunter's is mischievously wrong—the more modern productions are less boldly erroneous. Many syphilitic symptoms are not at all, or imperfectly delineated—other symptoms are described as syphilitic, which are dubious in their origin or character. Mercury is either not used, or it is abused—it is withheld when it would be safety, given when it is destruction. Scylla and Charybdis are on either side, and to avoid the one, the profession too commonly rush upon the other. In short, venereal symptoms are not sufficiently discriminated, mercury is not appropriately exhibited, and the result, as might reasonably be expected, is confusion.*—*Ibid.*

17. *Memoir of Dupuytren.*—In the number of the Lancet for February the 14th, we gave a biographical sketch of the late Baron Dupuytren. We now propose to take a view of him as a man of science,

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*In the foregoing article, want of space has compelled us to omit our facts, and to mutilate our opinions. In a succeeding No. we shall endeavor to point out the symptoms that require, and the best mode of giving mercury.

and record, while his memory is still fresh, some notice of all that he has done for the advancement of that art, to the perfecting of which his life and talents were incessantly devoted. It is not easy to convey a personal idea of Dupuytren. He was one of those individuals whose countenance always struck observers as emblematic of a mind whose exact character was not expressible in words. The contemplation o. his features left a 'je-ne-scai quoi' impression on the feelings even of the most acute physiognomists,—half pleasurable and half dissatisfied,—a sensation at once of admiration and dislike, for which it was found impossible to account. Dupuytren was a man of middle stature, brown cemplexion, and strong make. In his youth he must have been extremely handsome. Those who possessed the personal acquaintance of both must have observed some resemblance between Dupuytren and the professor of anatomy in the University of Dublin. The striking magnificence of forehead, expressive of intelligence of the highest order, and the small dark piercing eye which distinguished the one, had their rival in the other,—that eye, oftenest twinkling with playful malice in the one, and in the other darting those stern annihilating glances which rendered the presence of the great surgeon of the Hotel Dieu so imposing, and frequently so oppressive, to those who fell beneath his scrutiny. 'His eye,' says a French author, 'was enough to terrify a Corsair.'

But it was to the peculiar expression of his mouth that the physiognomy of Dupuytren owed its characteristic cynicism and appearance of universal distrust. Viewing the upper part of his face, and particularly his broad fair forehead covered by a thin white *chevelure*, the figure was that of a man imbued with feelings of benevolence and accustomed to exert the most untiring patience. But soon would the impression be destroyed by a sudden curl of the lip, and an almost imperceptible compression of the mouth, a fastidious though polite shrug of the shoulders,—tokens of the mental storm within, which, with calm exterior, he was disdainful to show, refusing to let his fellows become witnesses of any one feeling that governed him. Without the appearance of avoiding society, though present at all the learned meetings of the French capital, at the Faculty, at the Court, at the reunions of private life, Dupuytren was, intellectually speaking, a perfect anchorite. Admired by all, the friend (perhaps) of a few distinguished men, there was not one who could say 'I know him.' We have already hinted at a cause which, to many, explains the secret reason of the cynicism and distrust of his fellow-men that have thrown a shadow over the fairest days of Dupuytren's life. That cause was sufficient to account for even still more remarkable effects; but others attribute his constant ill-temper and *ennui* to a weakness which is common to a class of great men who are not yet sufficiently great to despise the malice of the envious. Dupuytren never forgot a kindness, and never forgave an injury. His ambition was full equal to his talent, and under the coldest exterior he concealed a heart which was sensible to the slightest impressions. He felt conscious of the superiority which he so fully possessed: and to justify his pretensions, he sacrificed all the pleasures and comforts of private life, and condemned himself, as we have heard him say, to 'lead the life of a dog.' 'Above all things avoid being an insignificant man' (*ce qu'il faut craindre avant tout, ce'st d'etre un homme mediocre,*) was one of his favorite maxims, and to escape the chance of a humiliating mediocrity, he devoted every energy of his mind, succeeding to the

utmost verge of his resolve, but not without most bitterly experiencing the stings of envy and calumny, nor without nourishing an implacable hatred against the authors of reports which a man of less susceptibility would have treated with deserved contempt.

The life of Dupuytren afforded various examples of the intensity of this dominant morbid feeling, and of the manner in which he avenged himself. How deep and ramified the root hypocrisy had taken in the vicious court of Charles the Tenth, is too notorious to need description. The royal favor there could only be obtained beneath the guise of professed religion. Every one had his confessor, and the worst sinners passed for the greatest saints. With this crowd Dupuytren was accused of mingling, in person and in object, and malice once went so far as to declare that he had dropped expressly from his pocket a little prayer-book within the precincts of the royal apartment. Innumerable epigrams sprang from the alleged incident, but, equally insignificant with the charge, they were soon buried in oblivion. The memory of the affront, however, never passed from the mind of Dupuytren, and years afterwards, on being accidentally called to attend the daughter of a countess, the supposed authoress of the story, he avenged himself by the infliction of treatment the most cruel and heartless on the mother, at the death-bed of her daughter.

The dress which Dupuytren invariably wore was very peculiar. At the Institute of the Faculty, in town or at the court, in summer and in winter, he was always clothed in a little round-cut green body-coat, to which, when he visited the hospital, was added a small green cloth cap, of a cut altogether original. Those who have at any time followed his clinique at the Hotel Dieu, will remember the slow the almost jesuitic pace, with which he entered the amphitheatre, the brim of his green casquette turned from his forehead, the white apron in front, his right hand thrust into the bosom of his coat, and his left constantly applied to his mouth; for no matter in what society he found himself, whether in public or in private, at the hospital or presiding at a concours at the Faculty, Dupuytren had a habit of constantly knawing the nails of his left thumb and index finger, like one who suffers from some intense bodily or mental pain.

When seated in the professor's chair, he never addressed himself to more than a fraction of the audience; his back was turned upon at least three-fourths of the assembly, and he commenced with a low and indistinct muttering, which afforded little indication of the splendid, and on many occasions truly eloquent discourse that was to follow. The most profound silence always reigned in the crowded class which filled the amphitheatre of the Hotel Dieu, as though all were anxious to catch even the first word that dropped from his mouth; and if, during the lecture, any one permitted himself to betray a symptom of *ennui*, one of his searching glances, with a motion of the lip expressive of the most ineffable contempt, covered the thoughtless culprit with shame and terror.

In the wards of the hospital, the originality of Dupuytren appeared even with more relief. On rare occasions he descended so far as to joke with a patient; but towards the students, and even to his own dressers, he was cold, ironical, capricious, tyrannical, to the last degree. Frequently did it happen, on questioning a patient for a few seconds, that if the answers were not given as clearly and precisely as the inquiries, he would punish the unfortunate *malade* by a shrug of his shoul-

ders, and a departure without a moment's further attention to him. Not easily shall we forget the day when the mother of a child whose leg he was about to amputate, having forced her way into the amphitheatre, suddenly interrupted the operation; the self command of Dupuytren left him, and forgetting what was due to humanity,—to a woman and a mother,—he turned out the agonized parent from the room, with a *coup de pied dans le derriere.*

Dupuytren never tolerated the slightest suggestion or contradiction affecting his measures or opinions, and, as we have remarked, his treatment of the pupils who were placed under him in the hospital was marked with the utmost austerity. The number of his dressers at the Hotel Dieu was twenty-six. At six of the clock every morning he called over the list, and no excuse for absence was admitted. More than once he has publicly degraded an *externe* who had disobeyed his orders, or showed some symptoms of insubordination, by tearing off his white apron and other such insignia; and, on one occasion, it is said that he so far forgot himself as to strike the apothecary of the hospital, giving the offended pharmaceuist, however, the honor and 'satisfaction' of a meeting next day in the Bois de Boulonge; but the duel was, we believe, prevented by the police.

It is a matter of sad experience, that talent and integrity alone are rarely sufficient to raise a man to the high posts of honor in a large capital. The candidate must have protection, and a *savior vivre*, without which he may struggle for years in obscurity. Dupuytren was fortunate in both respects. At a very early period of his life, places were offered to him in the hospitals of several large provincial towns, but he always took care to recommend to the post one of the young rivals whose fame or competition might at a future day become troublesome to him. Thus, of five or six competitors who originally opposed him, he succeeded in placing one at Clarmont, one at Rouen, and one at Strasbourg, and he finally vanquished the remaining three—M. Roux, M. Marjolin, and M. Delpech, in the celebrated concours which took place for the chair of Operative Surgery, on the death of Sabatier, in 1812.

Dupuytren owed his appointment to the head surgeoncy of the Hotel Dieu, where he has ruled, the absolute master, for the last sixteen years, to an accidental circumstance, which deserves to be recorded, both as an example and a warning to hole-and-corner surgeons in all quarters. Previous to the year 1817, Pelletan was surgeon-in-chief of the Hotel Dieu. Dupuytren, who served under him as second, soon became an object of jealousy to the old professor. Distrust succeeded jealousy; then followed mystery, and finally, a secret operation, by which Pelletan was completely ruined. In 1817, there was a patient in the female wards of the Hotel Dieu, who was affected with an enormous carcinomatous tumor of the upper arm. The disease extended to the parietes of the chest and to the neck. The blood vessels were altered, and several other unfavorable complications existed. On a consultation, Pelletan advised an operation, but Dupuytren, in a forcible manner, pronounced various reasons against any attempt to remove the tumor. The patient was undecided. In this state of things, Pelletan was imprudent enough to shut himself up with a few favored pupils, and perform the operation in private, without having informed Dupuytren, or any other person who was absent, of his intention. The patient died almost immediately afterwards, and this event was followed by the retirement of Pelletan.

The reputation of Dupuytren as a first rate surgeon was now fully established. His private practice became considerable, and in 1820 the assassination of the Duke de Berri introduced him to court, thus laying the foundation, if not of his professional reputation, at least of the immense fortune which he has left behind him. If report speaks truly, the surgeon of the Hotel Dieu on this occasion, for the first time, lost the *sang froid* and presence of mind for which he was so remarkable, and committed two essential errors,—one as a practitioner, the other as a courtier. In the first place he sounded the wound of the Duke,—a penetrating wound of the chest! In the next he abstained from answering the King when his Majesty addressed to him some question in Latin. Little faith, perhaps, will be placed in the excellence, or even, the existence, of the Latinity of Louis XVIII, for since the time of the scholarly James, the classics have fallen into disrepute at courts. However, here is the anecdote in detail, as told by a man of letters. Immediately after the accident, Louis, who loved his nephew tenderly, entered the sick chamber, surrounded by a crowd of princes and surgeons, burning with anxiety to know the probable issue of the injury, and at the same time anxious to avoid alarming the patient by any imprudent remark. The King turned to Depuytren, whose appearance even then attracted his notice. Nothing would have been more simple than a whisper in the ear of the surgeon, conveying a request for his opinion. But so close an approximation of king and subject as that species of communication would require, was incompatible with the dignity of a royal personage, and so it was regarded by his majesty, who relieved himself from the dilemma, by reducing his question into Latin, presumed to be the language of physicians, and one with which the patient was known to be but slenderly acquainted. But the words fell dead from the royal lips. No answer was returned to them by Dupuytren, whether from indisposition to reply, ignorance of the language, or confusion at the scene, and M. Dubois, who happened to be present, answered for him.

It was, however, rarely indeed that Dupuytren allowed himself to be surprised. If he was excelled in a few particulars by some surgeons,—if, for example, as we admit, M. Roux was quicker and more dexterous at an operation,—Dessault was more brilliant as a professor—Boyer more prudent and humane, and Marjolin more profound,—there was none who could compare with him for impertubility of mind in the midst of accidents and untoward circumstances, none whose eye was more certain, or whose hand was more firm. Like other surgeons, he has made mistakes. He has opened an aneurysm for an abscess, and has cut for the stone when no calculus existed in the bladder; but such errors only gave to Dupuytren an opportunity of displaying his superiority. They never disconcerted him. Thus, upon one occasion, when extirpating a tumor from the neck, he accidentally opened a large vein, and the patient expired in an instant, from the admixture of air with the blood. Without being affected by an accident which would have disconcerted nineteen out of twenty practiced men, he coolly turned to the class at once, to discuss the cause of death in an extemporaneous lecture, which has seldom been surpassed or equalled for the excellence of its matter and arrangement.

It was, indeed, as a clinical professor that Dupuytren obtained the surpassing reputation which placed him at the head of European surgeons. He succeeded, at the Hotel Dieu, the most eloquent lecturer

that France ever produced, and in his new office not only sustained the character of the school at its full height, but raised the clinical instruction to a point which must be regarded as little short of perfection. The ' Lecons Orales,' published under his direction, and from which we have translated so many lectures, convey, perfect as they are, but a feeble idea of the rich and well-selected materials which he has been for years submitting, without intermission, to the attention of the pupils of the hospital. Dupuytren was not what is usually called an orator. He seldom had recourse to literary embellishment, or borrowed from the works of others; but his elocution was simple and elegant, his language clear and perfectly correct. Weariness never stole over his audience during the lecture, from the assemblage of useless details, or superfluous repetitions. On the contrary, his discourse, which flowed from him with the ease and fluency of a perusal, was stored with facts selected from his own practice, and arranged with a clearness that showed how perfectly he understood and had studied every branch of the art.

As an operative surgeon he was successful, without being brilliant; indeed it is notorious that he failed much less frequently than his rival at La Charite, M. Roux, who, in spite of his wonderful dexterity, and excellent method of manœuvring the knife, lost at least three patients for every two of Dupuytren. The cause of this difference is easily explained. Surgery is no longer what it was a century ago,—the art of lawfully cutting and hacking the human body. A more rational direction is given to the studies of those who commence their surgical career. These first apply themselves to medicine as the parent art, and regard surgery in its true acceptation, viz: as a branch of medicine, in which the occasional employment of instruments is demanded. How numerous are the diseases awarded to what is called 'surgical practice,' which not only are 'internal,' but are quite beyond the reach of instruments! Regarding surgery in this its true sense, we hesitate not to place the late Baron Dupuytren at the head of European surgery. He operated with great dexterity and with immovable *sang froid*. But his chief qualities consisted in the perfect correctness of his diagnosis, and the admirable manner in which he managed the therapeutic treatment of his patients. In the great majority of all descriptions of cases, the great difficulty is to establish a correct diagnosis, for on that alone can treatment be correctly founded. The one is subjective to the other, and is a secondary branch of the art. In diagnosis Dupuytren was equalled by no surgeon of his time. A few questions, often put in the most careless tone, a single look, the application of the hand on the abdomen, were sufficient to reveal indications, which, assembled in his mind with almost inconceivable rapidity, afforded conclusions to the surgeon that seldom if ever were erroneous. Not that he was infallible; and it was a reproach that he did not evince that frankness of manner and readiness to acknowledge the commission of an error, which should distinguish all men, and especially surgeons. So far from exhibiting a willingness to admit the commission of a blunder, Dupuytren was not ashamed to resort to unblushing falsehood to conceal it. On one occasion, for instance, at the Hotel Dieu, where the intestine had been opened during the operation for strangulated hernia, Dupuytren, when showing the piece to the class, forcibly thrust his finger through the incision, and dilated with eloquence on the curious way in which gangrenous inflammation sometimes *cuts through the intestines like a*

knife, although the interne at his side (at the risk, as he himself said, of being kicked) now and then gave the professor a hint that he was mistaken, and that the opening which he demonstrated was not due to inflammation but to the bistoury. Traits of this kind were not unfrequent. The *amour propre* of Dupuytren even pushed him to the publication of inaccuracies where he was certain of being detected. Thus, in his 'Lecons Orales,' and long before them, in 1824, he boasted that the mortality of the Hotel Dieu was reduced to one patient in twenty, one in nineteen, or one in eighteen, as a mean term, but authentic documents, since published by the authority of the Council-General of hospitals, showed that at that very period the mortality amounted to one in fourteen.

As a writer his reputation is neither great nor extended. He was, in fact, so occupied by practical duties that he had not time to write. It was chiefly as a clinical professor that he shone, and during the twenty years that he gave instruction, the clinical school of the Hotel Dieu has produced more brilliant surgeons, and disseminated more new and wholesome ideas of surgery, than any other establishment of the kind in Europe.

If Dupuytren, however, did not himself write, yet his ideas have been taken up and published by others, and it would not be a matter of difficulty to enumerate a number of excellent works, of memoirs which have covered their authors with renown, that were taken from the fertile source of his clinical instruction. The little which Dupuytren has furnished from his own pen, is to be found in the Memoirs of the Royal Academy, and in the Dictionary of Medicine. Amongst the most remarkable we may enumerate, *in anatomy*, Researches on the Spleen, on the Veins of Bones, on Fibrous and Erectile Tissue: — *in physiology*, on the Nerves of the Tongue, on the Motions of the Brain, on Absorption, and on the Influence of the Eighth pair of Nerves: — *in pathalogical anatomy*, Memoirs on the Neck of the Long Bones, on False Membranes, on Amputation of the lower Jaw-Bone, on Ligature of certain Arteries, on Fracture of the Fibula, on Artificial Anus, on Diabetes Mellitus, on Congenital Luxation, and on Retraction of the Fingers. It is said that he has left an unpublished treatise 'on the Diseases of the Glands.'

Besides these permanent 'titles,' Dupuytren has modified a great number of operations, and is the author of several most useful instruments. For example, his *enterotome* is sufficient alone to have immortalized any reputation; indeed we should be inclined to place his operation for artificial anus after that of lithotrity, and it is infinitely more successful. Thus, up to 1834, forty-one operations, the greater part of which had been rendered necessary by gangrene of strangulated hernia, were performed with the enterotome. Of these only three were unsuccessful; the remaining thirty-eight patients were cured without any accident or risk. Since 1824, at least one hundred operations of the same kind have been performed, and with similar results. Dupuytren also invented a double-bladed bistoury for the bilateral operation, a cataract needle, a compressor in cases of hemorrhage, a porte-ligature; and, as we have mentioned, he has introduced excellent modifications of most of the great operations in surgery.

By his death the science has lost one of its most solid ornaments, and the School of Medicine in Paris its most accomplished professor. The void which he has left is immense. Who can fill it? Who can now

succeed to that chair with eclat, which has been filled by Dessault, Pelletan, and Dupuytren? That it will even be filled to the best advantage which circumstances admit, we have reason to disbelieve. Intrigue is at work, and there is cause to engender a fear amongst the profession at Paris, that the clinical instruction in the Hotel Dieu will be intrusted to one of the worst clinical lecturers in the capital. M. Roux removed to the hospital on Monday last, and his place will be filled by Velpeau. — *London Lancet.* — *Boston Med. Magazine, May*, 1835.

II.—ORIGINAL.

The Western Journal.

E Sylvis Nuncius.

CINCINNATI, JULY 1, 1835.

I. — EDITORIAL AND PUBLISHING ARRANGEMENTS.

AGREEABLY to a notice in our last number, the subscription list of the Western Medical Gazette has been united with that of the Western Journal, which will be sent to the subscribers of the former, who, unless they return this number, will be regarded as subscribers to the consolidated Journal.

It will be seen that the publishers, Dr. Charles R. Cooper and Dr. Silas Reed, are also, assistant editors. The articles which they contribute will be marked with the initials of their respective names; those not thus indicated will be from the pen of the senior editor.

II. — MEDICAL SCHOOLS.

That our readers may have a full and authentic account of the recent exertions of the profession, to reorganize and improve the condition of the Medical College of Ohio, of the total failure which has occurred, and of the origin of a new school, under the auspices of the Cincinnati College, we have added to this number a supplement or *extra-limites* of 35 pages, to

which we beg leave to refer all who are interested, reminding them, that the number contains, independently of those, the usual number of pages.

III. — Western Academy of Natural Sciences.

An association of gentlemen in this city, under the above title, has recently been formed, for the purpose of studying and developing the natural history and resources of those parts of the Valley of the Mississippi, to which they may be able to extend their researches. Knowing them as we do, personally, we are enabled to say that among them there are several who, by their attainments and zeal, are well prepared for the important work of science and patriotism which lies before them. They have opened an eligible apartment in which to prepare and arrange their collection, which is designed to embrace specimens of animals, plants and minerals, not a few of which have already been brought together. They have, also, begun the formation of a library of natural science, and will be particularly gratified to receive dissertations, tracts and even newspaper notices, on the zoology, botany, mineralogy, geology, and meteorology of the West, from the Lakes to the Gulf of Mexico. Specimens of its natural productions are, also, respectfully solicited; and whenever the donor desires it, he will be furnished with a correct account of the names of the specimens he may send, which, if he have kept duplicates, will at once give him the advantage of the labours of the Academy.

The officers for the present year are:

Robert Buchanan, *President.*
John P. Foote, } *Vice Presidents.*
Isaac Colby, }
George Graham, *Corresponding Secretary.*
William Wood, *Recording Secretary.*
James Smith Armstrong, *Treasurer.*
Robert Buchanan, }
John Locke, }
Joseph Dorfueille, } *Curators.*
James H. Perkins, }
John L. Riddell, }

Boxes of minerals, shells, fossils, bones, and other specimens may be sent, at the expense of the Academy, to the care of its president, Robert Buchanan, Cincinnati. A notice of its locality should always accompany each specimen.

IV.—Benefits of Practical Phrenology.

A couple of "down-easters" are consoling themselves under the death of Dr. Spurzhiem, by making a practical application of the doctrines which he sought to naturalize in their native country. They were lately in our good city, the Gotham of the West, and opened a shop where they wrote out characters at one dollar per head, which was certainly dog cheap. When one failed to give a response which was grateful to the "self-esteem" of the pilgrim to this new Delphic Oracle, the other was always at hand to correct his mistakes, by a second manipulation. Printed blanks were kept and filled up with the numbers indicated on the arc of the callippers, so that each one bore away his character and destiny in his breeches pocket! Thus many of our citizens have undergone a kind of graduation, and are furnished with diplomas as conscientious, pious, benevolent or loving gentlemen, which may be used as future exigencies require. We have not heard that the organ of "credulity" was particularly developed in any of them, but it is well known that the defects of extensity are supplied by the strength of intensity. Time, the great teacher, can only reveal to us the fruits of this scientific mission to the benighted West; but we may anticipate that they will be "pretty considerable:" That many new projects will be set on foot, by those who have been apprized that they are endowed with "ideality"—that the "combative" will indulge their instict under a new warrant—that the "acquisitive" will branch out into additional speculations—and bachelors, reassured, make new overtures, backed by a certificate.

Could those distinguished and dignified philosophers, Gall and Spurzhiem, have foreseen such a prostitution as we have

lately witnessed of the principles to which they devoted their lives, all their "firmness" could not have enabled them to die in peace.

V. — Death of leaves by the fumes of Lead.

A young sugar tree, (*acer saccharinum*,) planted along one of the side walks of this city, put forth several tufts of leaves near the top of the stem, about seven feet from the ground. When they were growing luxuriantly, the box, a large one, in which the tree was enclosed for protection, was painted with white lead, in oil. By the next day the whole of them had wilted, and have since been replaced with a new crop. This was a palpable and fatal case of saturnine paralysis in the vegetable kingdom.

VI. — Nitrate of Silver in Tonsilitis.

It is well known that no disease is more likely to recur than suppurating tonsilitis, which, under the name of quincy, will return upon some persons, on the slightest exposure to a cold and damp atmosphere, subjecting him to repeated suppurations. It is perhaps not generally known, that on the access of this malady a vigorous and early application of lunar caustic, in the solid form, or dissolved in rain water, in the proportion of eight or ten grains to the ounce, will more certainly arrest the inflammation and prevent an abscess, than any other method of treatment. If, however, there should be fever, venesection and an emetic should be premised. The application of solid caustic to the tonsils until they "turn pale," gives but little pain. If it should escape from the quill and be swallowed, it may be decomposed with salt and water, or a solution of sulphate of magnesia.

VII.—Chalybeates in Dropsy.

Dr. William Pettit, of Columbiana county, Ohio, has sent us a paper commending the use of Rubigo Ferri mixed with port wine, in the treatment of Dropsy. He thinks that the influence of Dr. Rush, in favor of the antiphlogistic method, has had, in many instances, an unfavorable effect on the practice of American physicians. Dr. P. states, that his attention was some time since directed to this medicine, by Dr. Isaac Parker, of Jefferson county, in this state, an old and respectable physician, who assured him that he was generally successful in the management of ascites and anasarca, by means of the following preparation:

℞ Carbonate of Iron ʒi.
Port Wine Hj.
Mix.

Agitate when used, and give half an ounce three or four times a day.

Dr. Pettit has given two successful cases in detail. We shall abridge one of them.

A lady aged 36 years, after the birth of her third child, became ascitic, and in despite of a great variety of means, administered by different persons, both in and out of the profession, continued in that state for several months. When called to attend her, Dr. P. resorted to tapping and drew off thirty-eight pints of fluid. He then gave her the German mixture of cream of tartar, sulphate of potash, squills and tartar emetic, but symptoms of reaccumulation ensued. In this exigency he had resource to the rubigo ferri in port wine, which was perfectly successful. She subsequently became pregnant, when dropsical symptoms again returned, but were promptly arrested by a resort to the chalybeate.

We think it probable, that while some cases of dropsy requiring antiphlogistics are improperly treated in the opposite way, others are prolonged, or rendered fatal, by an adherence to the former, when the latter method is required. The books would no doubt furnish authority for giving seda-

tive and refrigerant diuretics, like those administered to this lady, after the operation of paracentesis, but such a practice rests on no solid foundation. Tapping should never be employed as long as there is active or even subacute peritonitis, and after it is subdued, whether the water be drawn off or not, tonics, among which none are superior to the chalybeate preparations, are undoubtedly the proper remedies.

We would here inquire whether any of our readers have given a trial, in dropsy, to the sulphate of iron, in drachm doses, as recommended by the physicians of the Italian school? If so, we should like to be informed of the results of their practice, and would make them public.

VIII.—Greenville Epsom Springs, Harrodsburg, Ky.

In the second volume of this Journal we published an account of these springs. The great increase in the number of our subscribers since that time, will justify our republishing the results of the analysis of one of the fountains.

Sulphate of Magnesia, in large quantities—the characteristic ingredient.

Carbonate of Magnesia, in a small quantity.
Sulphate of Soda, do.
Sulphate of Lime, do.
Carbonate of Lime, a trace.
Iron, (probably a sulphate,) do.
Sulphuretted Hydrogen, do.

These springs have deservedly acquired much celebrity. The enterprizing proprietor, Dr. Graham, has expended on them thirty thousand dollars, and has comfortable accommodations for five hundred visitors.

IX.—Blue Sulphur Spring.

Dr. Patrick, of Charleston, Va., has favored us with some bottles of water from a mineral spring, hitherto not much

frequented. It is situated about twenty miles west of the White Sulphur, and the same distance north-west from the Red Sulphur Spring, Greenbriar county, Virginia.

We put a quantity of this water into the hands of Mr. Riddell, advantageously known to the readers of our journal as an able chemist, mineralogist, and botanist, who being at the time about to set off on a tour of observation, could not subject it to a full and accurate analysis. He obtained, however, the following results; and has promised, on a future day to make a more thorough examination.

The following are the ingredients:

Sulphuretted Hydrogen.

Sulphate of Magnesia, or *Epsom Salt.*

Sulphate of Soda, or *Glauber Salt*, a trace.

Sulphate of Lime.

Muriate of Soda.

Muriate of Lime.

Bicarbonate of Magnesia.

Bicarbonate of Lime?

A spring holding such ingredients, in solution, cannot fail to prove highly beneficial in chronic diseases of the liver, stomach and bowels.

Western Virginia abounds in mineral springs, exceedingly diversified in their qualities. It is, indeed, unequalled in the United States, and not surpassed perhaps by any district of country in the world.

X.—Exemption of certain parts of the Delta of the Mississippi, from Autumnal Diseases.

In an interview which we lately had with the very intelligent and respectable Dr. Cartwright, of Natchez, he pointed out certain parts of the Delta of the Mississippi, which are proverbially exempt from summer and autumnal diseases, and deserve, in his opinion, to be classed among the very healthiest portions of the Union. They are the banks of the numerous bayous and lagunes (obsolete mouths of the Mis-

sissippi,) between the thirty-first degree of latitude and the Gulf of Mexico, lying west of Lafourche. The water in these bayous, five or six in number, is stagnant. On either margin there is a slip of land from a quarter to half a mile in width, that is sufficiently high to be cultivated, back of this slip is a cypress swamp, then a shaking prairie, and then a lake, the banks of which are uninhabitable. The water of the bayous although stagnant is clear, and almost hidden by aquatic plants, one species of which, the most abundant, is unconnected with the soil and floats in the water—having a knotted horizontal root, resembling that of the cane. Another appears to be the *Pistia Stratiotes* of the botanists.

From observations and inquiries made on the spot, and on similar localities in other parts of Louisiana, where the currents of the bayous prevent the growth of these vegetables, Dr. C. has come to the conclusion, that the sole cause of the great salubrity of the places referred to, is their action on the waters and the air; and, in accordance with these views, has taken measures to introduce them into lakes further up the Mississippi, the shores of which are now infested with bilious fevers.

XI.—Winter Retreat for those inclined to Pulmonary Consumption.

The gentleman just quoted, has expressed to us the opinion, that the maritime portions of the state of Mississippi, lying below the 31st degree, and between New Orleans and Mobile, constitute one of the best retreats in the United States, for persons who are threatened with pulmonary consumption. They, however, in whom the disease is established, should not leave home for that or any other place in the South, as it has appeared to him, that a southern climate has rather accelerated than retarded the fate of such patients, which is very much the result of our own observation. The soil and climate of

the tract of country, to which we have alluded, are described by Dr. C. as sterile, temperate, and comparatively free from humidity.

XII.—Method of finding the Dew-point.

The gentleman quoted in the preceding articles, writes us from Philadelphia:

"I have learned from Mr. Espy, of this city, a very easy and convenient method of ascertaining the *dew-point.* As it originated with him, and has not been published, it may be interesting to you. I think you will find in Ure's Dictionary of Chemistry, tables by which the humidity of the atmosphere, etc., can be ascertained whenever the dew-point is known. It is troublesome to ascertain the dew-point by the usual method. Suppose, therefore, the thermometer is at 79°, and another thermometer with the bulb wetted or wrapped with a wet cloth is at 67°5. The dew-point will be found to be 61°5, by the following method: 79°—67°.5=11,5×103 =1184,5÷67,5=61,5. The 103 is a fixed term, arrived at by experimental labor. It is necessary, in order to arrive at this result, that the thermometer as well as the wet bulb thermometer, should be fanned for ten or fifteen minutes, and to take the numbers from what the two thermometers indicate after the process of ventilation. For instance, the thermometer might have stood at 80° or 81° in a still atmosphere, but by fanning the air around it, it would fall to 79°. By knowing the dew-point at any time, it will be an easy matter to tell how much vapor the lungs are throwing off—whether the patient be in too humid an atmosphere, or not sufficiently so—and many things of the kind which may be turned to practical account."

XIII.—Mercurial Transudation.

A case of Mercurial Transudation from the cutaneous surface, under the use of the pilulæ hydrargyri. Communicated by B. F. Williams, Student of Medicine, late of Sandusky, Ohio.

Mrs. A. C., aged 36, of strumous constitution, became affected with induration of one of her breasts, while nursing her third or fourth child. She was ordered a milk and farinaceous diet, with topical applications, and the daily use of the *blue pill.* Pursuing this course for several months, she found herself better. She was then siezed with ague and fever, for which she took the sulphate of quinine, which excited copious perspiration. In wiping the perspiration from her face she observed on her hand and on her handkerchief a great number of minute globules of fluid mercury. On making this discovery, and observing the phenomenon on successive days, she discontinued the use of the pill, and soon after the mercury ceased to exude. It was distinctly and repeatedly seen by numerous persons. She assured me that she had no unusual feelings or indisposition during the employment of the medicine.

Cincinnati, June, 1835.

XIV.—Hot Douching in Sprains and Bruises.

It is not uncommon to see cold water applied forthwith to parts which have been strained or bruised, while a state of nervous irritation and reduced circulation, still exists in the general system. This practice we take it, is radically wrong. Some years since, a judicious non-medical acquaintance took some pains to impress upon us the results of his own experience in favor of hot bathing in cases of this kind. After having given the practice a "fair chance," we are enabled to speak of it in terms of decided approbation. It is especially adapt-

ed to persons of a nervous and irritable temperament. We have at this time a patient whose case is in point, and has, indeed, suggested the propriety of this notice. In jumping from a high fence, she lit upon the outside of her left foot, and when taken up was unable to stand. Considerable tumefaction immediately followed, with a total inability to move the ankle-joint. Extensive ecchymosis has since ensued, around and above and below the outer ankle. Being kept in a horizontal posture, with her foot over a tub, hot water was poured over it by the hour, and repeated as often as the pain recurred. She is now convalescent, without the slightest symptom of inflammation. We need scarcely add, that *should* inflammation ensue, in a case of this kind, the hot water would not be the best remedy, being, in reference to that pathological state, preventive not curative.

XV.—Lithotomy.

This is becoming an operation of more frequent performance among the younger members of the profession, and we hail it as an omen of increased attention to the study of our science. We are the more highly gratified because, from their remote situations, in many instances, from the great seats of medical learning and surgical operations, it could hardly be presumed that they have pursued a minute course of anatomical investigation, with a view to the performance of the more important operations in surgery. But such seems to be the fact. We have recently received a short notice from Dr. Taft, of the performance of a lithotomic operation, in the Delaware county poor-house, by Ferris Jacobs, M. D. It is stated that the encrusted surface of the stone was composed of the oxalate of lime, and that the entire calculus weighed five ounces. The patient was discharged a few weeks after the operation, perfectly restored. C. R. C.

June, 1835.

XVI.—Call for Physicians from the Sandwich Islands.

We have lately received the following letter from one of the physicians attached to the Mission on these islands, under the direction of the American Foreign Missionary Society; and publish it for the information of such young physicians in the Valley of the Mississippi, as may, from religious feelings, have a disposition to connect themselves with remote missionary establishments.

Sandwich Islands, Dec. 19th, 1834.

Dr. Daniel Drake, Professor, etc. Cincinnati, Ohio:

Dear Sir, At a general meeting of this mission, held in June and July last, it was resolved, "That letters be addressed by us to the principal colleges and literary institutions in the United States, on subjects connected with the conversion of the world." From the commencement of our mission we held correspondence with societies and individuals in many of the colleges and theological schools, and have presented the command of Christ, "Go ye into all the world and preach the gospel to every creature," and have the importance of obedience, by exhibiting the appalling condition of 600,000,000 of our fellow beings, living in sin and without God in the world. Our appeals have hitherto been made to those preparing to preach the everlasting gospel, and we have called and invited them to come over and help us. But there is a field open, of wide extent, for the benevolent efforts of men of every profession. Particularly is there need of the labors of pious and well informed physicians.

Our mission at present consists of fifty-seven adult persons and sixty children, one hundred and seventeen persons in all, and a reinforcement of six or more is on their way out. The families are dispersed over five different islands, thro' an extent of 400 miles, and tho' there are three physicians devoted to their medical wants, the supply is found to be very inadequate. The frequency of the calls, and the irregular means of conveyance, from island to island, render it impossible for them

to pay suitable and requisite attention. A physician could sooner, more conveniently and cheaply go from Boston to Charleston, S. C., or to Detroit, Michigan, than some of our requisite visits can be made, and at this time several families suffer for need of medical aid. They are so remotely situated that our physicians cannot attend to all. Two additional medical men are immediately needed, that there may be one on each principal island. Much suffering and anxiety might thus be prevented among those who have voluntarily forsaken all for the kingdom of Christ's sake.

Another extensive and important field of usefulness is open in the practice afforded among the natives. The multitudes of diseases of long standing and the frequency of deaths which might apparently be prevented by an enlightened treatment, are evidences of the insufficiency and imbecility of their medical practice, much of which consists in charms and incantations, and the whole is destitute of skill or correct principle. We have known individuals suffering with both acute and chronic diseases, the effect of drastic medicines taken, in perfect health, from a belief that they might soon be sick. And we have known others, moving about in the morning, without an appearance or a symptom of disease, at night the victims of the same absurd and superstitious practice. But we have lived here to see these customs decreasing, and a preference felt for the medicine of the foreigner, wherever it has been used.

As teachers in schools, or in imparting divine truths to this people, there are no limits to the field, and every moment that the missionary physician can spare from his profession, can be profitably employed. We hope ere long to see statesmen, and men eminent in every profession, among the natives of these islands. There are talent and genius, and powers, susceptible of being expanded to an unlimited extent, and we have evidence of the existence of minds of the highest order, among the people around us. We have a high school in successful operation, where we shall ere long have lectures on the different departments of science, but we need provisions for carrying the scholars through the different professions, and for this purpose need the men on the ground, acquiring the language, learning the ways and manners of the people, and in every way qualifying themselves for the work. Our cause, we

feel, is urgent. It is no less than raising 130,000 souls from a state of degradation, or little superior to the brutes, and elevating them to the condition of enlightened and Christian countries. And are there not, dear sir, young men under your tutelage willing to assist in the work? Are there not those possessing piety, and benevolence, and self-denial enough to constrain them to forego the prospects of wealth and comfort, among an enlightened society, if they can possess the nobler, more satisfying prospect of alleviating the moral and spiritual condition of thousands ready to perish? Can you not, will you not, tell them of our wants, of the wants of this benighted land, and urge them to come to our aid?

We shall be happy, dear sir, to hear from you. Communications addressed to the Sandwich Island Mission, and sent to the Missionary Rooms, Boston, will be forwarded, and receive due attention from us. In behalf of the Sandwich Island Mission,

I am yours, etc.

ALONZO CHAPIN, M. D.

We cannot but hope, that some of our younger brethren will feel inclined to accept of the invitation here so eloquently given. Christian misssons are not now what they once were, mere projects of religious conversion, unaccompanied with preparatory and co-operative efforts at the introduction of learning and the necessary and simple arts of civilized life, for now the latter are, indeed, rather placed in advance; and among the whole of the efforts of Christendom in the uncivilized world, there is not one which seems to have been made more rigidly on this principle or with more striking succes than this, whether we refer to the introduction of knowledge or religion. Here then is a great object of benevolence, altogether worthy of the attention of the man of science, as well as the Christian, and why should not the medical profession contribute its aid? an aid which can be afforded from no other quarter. We cannot but think, that a residence, for a few years at least, in the Sandwich Islands, would be attended with many agreeable results to the young physician, who might, in his novitiate, go thither. The climate of these islands is temperate, pleasant, and salubrious, notwithstanding they lie within the tropics.

The study of their natural productions would be interesting, and the opportunities of becoming acquainted with the physical and moral temperament, the modes of living, and the peculiar diseases of a portion of the Malayan variety of the human race, would of course enlarge and enrich the mind of the observer, to say nothing of the valuable observations that might be made on the ocean, and the ports touched at in the voyages out, and home again, in the event of a return. Should any of our young readers embark in this enterprize, we shall hope ere long to present our readers with a chapter of interesting scientific details from OCEANICA.

XVII.—Obituary.

We copy from the Cherry Valley (New-York) Gazette, of the 24th of March, the following obituary notice. It will be remarked that the deceased was the surgeon who performed an important surgical operation, recorded in the first department of this number.

"Died, on Wednesday, March 18, at his late residence in this town, after a long and distrossing illness, which he bore with quiet resignation and unshrinking fortitude, Delos White, M. D. in the 47th yeur of his age. He was a native of this town. In 1809 he became a graduate of Union College, and immediately after commenced the study of medicine in the city of New York, which he prosecuted with great success. He closed his labors as a student, and began his professional career under the direction and auspices of his father, the late Dr. Joseph White, well known as one of the most eminent medical men in the state. Perhaps no practitioner of the healing art ever possessed more entirely the unwavering confidence of those to whom he was known, (and he was known extensively,) than Dr. Delos White, and certain we are that there are few, if any, who ever better deserved that confidence. He occupied a distinguished station among the first rank of his cotemporaries as a surgical operator, and was for some time a professor of anatomy in the Western Medical College of New York. But independent of the loss of his professional skill and services, in the late bereavement, our society has been deprived of one of its most estimable and useful members—kind and benevolent as a neighbor, and ardent and zealous as a friend, he was loved and is lamented by all. An amiable wife, and a numerous and most interesting family of sons and daughters survive to mourn tho irreparable loss of an indulgent and tender parent and affectionate husband.

The funeral of Dr. White on Saturday, was numerously attended. The solemnity and grief which was visible in every countenance, afforded a striking demonstration of the esteem and affection of those who knew how to appreciate his worth and their own loss."

SUPPLEMENT

TO THE

WESTERN JOURNAL

OF THE

MEDICAL AND PHYSICAL SCIENCES:

FOR APRIL, MAY AND JUNE, 1835.

Reform of the Medical College of Ohio.

Within the last eighteen months, we have, from time to time, furnished our readers with facts relative to the Medical College of Ohio; and propose, in this number, to give them an account of some recent efforts to improve the condition of that ill-fated institution.

Its Board of Trustees, eleven in number, are appointed by our General Assembly, every three years. From the time of the appointment of the first Board early in 1823, nearly the same persons were re-elected, and when new ones were now and then introduced, they were generally nominated by those already in place; so that the same *animus*, directed the policy of the College, through this long period of twelve years, and the class never but once rose to 130 pupils, and for seven or eight years, from ten to sixteen, were beneficiaries, admitted under a statutory provision. Even as late as last year, the class of *bona fide* pupils was so small, that five weeks after the course commenced, the professor of Surgery had sold but 64 tickets.

The term of service of the Board appointed in January 1832, expiring with the year 1834, the General Assembly thought fit to elect a Board, but two of whom had ever served

before, the remainder consisting of equally respectable gentlemen, both of town and country. Their names were given in the last number of the Journal.

While the election of the Board was pending in the Legislature, the following petition originated in Cincinnati, and being signed by a large majority of our physicians, was sent into the country, where it received more than 100 additional names, among which we recognize, many of the most respectable physicians of the state.

MEMORIAL,

TO THE HONORABLE THE BOARD OF TRUSTEES OF THE MEDICAL COLLEGE OF OHIO.

GENTLEMEN:—We the undersigned, physicians of the state of Ohio, feeling deeply for the interests of the Medical College, which appears to be in a languishing condition, when compared with its sister institutions, would respectfully suggest to your honorable body, that a change might be effected in its faculty, which would increase its strength, and make it more acceptable to the profession in the Valley of the Mississippi, and consequently more useful as a school of Medical science. What that change ought to be, will remain for those who preside over it to determine; but unless something be done speedily, it seems to us that it will, ere long, pass into entire neglect.

Cincinnati, February 9th, 1835.

CINCINNATI.—C. R. Cooper, Silas Reed, M. Flagg, William Mount, William Wood, V. C. Marshall, William Judkins, Charles Woodward, John T. Shotwell, Isaac Colby, William S. Ridgely, Landon C. Rives, Charles Higbee, Stephen Bonner, W. Raymond Sanderson, B. Franklin Williams, Israel S. Dodge, Ezra Read, B. F. Bedinger, Wm. Barnes, Wolcott Richards, James M. Mason, Samuel S. Houston, B. S. Lawson, Thomas S. Towler, G. Bailey, Joseph Gardner, James M. Ludlum. 28.

OHIO.—Peter Allen, D. W. Rhodes, I. A. Parker, John A. Gano, William Steele, Joshua Martin, A. H. Brower, Charles C. Haddock, Thomas C. Shreve, Samuel Underhill, B. Michener, Charles D. Daggett,* James Welch, R. T. Elson, A. C. Bruce, David Mills, John K. Finley, Joseph W. Patton, C. I. Ward, I. Moore, James R. Hughes, Joel Fithian, James M. Cary, L. W. Trask, John G. Stevens, George E. Conant, Edwin Smith, I. Clements, William M. Charters, E. Dillon, N. H. Cass, Ignatius O'Ferrall, A. I. Bennett, William S. Myres, I. Bubant, William Blackstone, W. E. Thomson, Peter Spink, Jesse Paramore, Pliny M. Crume, F. A. Cunningham, Joseph Cole, Thomas Richmond, John O'Ferrall, I. T. Teller, R. W. Stearns, William M. Murdock, Merchant W. Muxfong, W. S. Richards, Sylvester Spelman, William W. Bancroft, William Bushnell, A. Sutherland, H.

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* Of the respectability of this memorialist there can be no doubt, as he received the honorary degree of Doctor of Medicine, at the late commencement of the College.

Reintzel, A. G. Miller, John Free, W. D. Slocam, William M. Deming, Washington Moorehead, John A. Turner, William F. Collum, John N. Wilson, Elijah Cooper, William McHenry, Issaac S. Perkins, Thornton Marshall, M. M. Doulee, I. S. Prescott, I. S. Wilson, William Bell, William I. Hunt, Charles Reed, Isaac Steese, Alexander Anderson, P. Beaugrand, Elijah F. Bryan, Greenleaf Norton, H. Stidger, Alfred Heacock, R. G. Huntington, I. I. Brice, D. Marble, Isaac Fisher, Elias Fisher, Thomas H. Gibson, William N. Luckey, James B. Finley, Edson B. Olds, E. Webb, A. T. Davis, T. Welch, Joseph K. Sparks, A. Brooke, Cyrus Falconer, Jacob Hittel, I. McMechan, John McCrackin, J. M. Dillon, I. W. Warfield, H. H. Mott, J. C. Bennett, Abel Underhill, I. V. C. Teller, I. F. Patterson, I. Boyce, H. A. Robinson, P. Wallace, A. Beasley. 103.

This memorial was sent into the country with the following circular attached to it:

CIRCULAR.

Cincinnati, February 19, 1835.

To the Medical Profession of Ohio:

Gentlemen:—The above memorial embraces by far the larger portion of respectable physicians in Cincinnati and vicinity. Indeed, it becomes us to say, that but nine or ten at most, with the exception of the faculty of the Medical College of Ohio, have refused to sign it, and the reasons generally assigned for the refusal were entirely of a personal character; at the same time acknowledging the necessity of a change in the faculty of the institution. Three of the ablest professors in the school have declared *their belief* that reform is necessary, and one of them has said, that he saw nothing objectionable in the memorial, and that for his own part, he would have no hesitation in signing it. We have taken the liberty of sending this memorial to our professional brethren throughout the state of Ohio, for the purpose of procuring their names and their influence to aid us in effecting this great work of reform. We would thank our friends to whom this paper is sent, to circulate it among the profession in their town and neighborhood, and return it to us as early in March as may be convenient. We ask them especially not to delay its return.

Most respectfully, etc.,

C. R. COOPER,
S. REED,
M. FLAGG,
WM. MOUNT,
WM. WOOD.

Dr. Drake having been informed of this undertaking, addressed to some of the gentlemen engaged in it, the following letter, which was likewise sent out with the memorial:

Cincinnati, February, 17, 1835.

To Doctors, Cooper, Reed, Flagg, Mount and Wood:

Gentlemen:—I understand that you and some of your friends are engaged in circulating among the physicians of Ohio, a memorial to

the trustees of our Medical College, requesting them to reorganize its faculty. I entirely concur with you in the necessity of that measure, and am pleased to find the profession in the city, at length, disposed to co-operate with that of the state, in efforts which cannot fail to be productive of public benefit.

But, from the great number of times that my name has been mentioned in connection with the Medical College, and from the false impressions made on the minds of many persons, both in and out of the profession, that the sole object of reform is to replace me in the faculty, I feel it due, both to you and myself, to say, in the most explicit terms, that if offered a chair, I should not accept, unless such extensive changes where made, as to create a prospect of immediate and permanent success. I am in fact, not a candidate for a professorship; and I desire that none of my friends may prosecute the object of reform, with the least reference to my accommodation; or go one step further than they would consider necessary, if I were not in existence.

As far as a feeling of personal regard towards me, may blend itself with the desire to raise the institution to respectability, I feel grateful; but must advise those friends in whom it may exist, that I cannot allow it to bring upon me an obligation to re-enter the school, unless a state of things should arise, that would make it consistent with my honor and interests to do so,—of which, I trust they would cheerfully permit me to be the judge.

I am, most respectfully, your obedient servant,

DAN. DRAKE.

These documents were sent to the Board about the time of their first meeting, which was on the 14th of April. At that meeting they appointed a committee of three of their most intelligent and respectable members, one of whom, Dr. Rigdon of Hamilton, was a physician, with instructions to inquire into the state of the faculty, and the means of improving its condition and character. The committee deeply impressed with the responsibility which had been thrown upon them, and influenced by an anxious desire to improve the condition of the school, issued the following circular.

Cincinnati, April 14th, 1835.

SIR:—The Board of Trustees of the MEDICAL COLLEGE OF OHIO, appointed at the last session of the Legislature, held their first meeting this day. The members, a majority of whom appearing for the first time in their present capacity, without the experience necessary to a proper fulfilment of their new duties, are anxious to avail themselves of the counsel and views of those, whose business and positions in life, are most likely to enable them to judge correctly. It has been thought advisable to consult particularly, the prominent members of the profession in Ohio, on this important question. A committee was, in obedience to these views, appointed.

The undersigned, composing this committee, beg leave to call your attention to the subject of the MEDICAL COLLEGE, and to request from

you such opinions, views, and advice, as your engagements will permit you to offer. We would especially call your attention to two points.

1. To what cause is the actual depressed state of the Medical College attributable? Is the defect to be sought in the faculty, or in the Board of Trustees? Or does the want of success depend upon circumstances, over which neither have had control.

2. If in the faculty, what remedy would you propose, which, under existing circumstances, may be practicable?

As early an answer as possible to those queries, is requested, as the Board meet on the 14th of May, to make the necessary arrangements for the next session.

Viewing the Medical College as a state concern, in which every citizen is interested, and relying upon your co-operation in a case so intimately connected with the honorable profession of medicine, and of science generally,

We have the honor to be your obedient servants,

MORGAN NEVILLE.
JOHN C. WRIGHT,
LOAMI RIGDON.

This circular met, we understand, with candid and respectful answers, from more than 40 physicians, resident in various parts of the state; which replies with the memorial previously sent in, became the basis of a report made by the committee, at the next meeting of the Board, on the 20th of May, and by them accepted and ordered to be spread on their minutes. It was as follows:

The committee, to whom was referred the duty of inquiring into the practicability of procuring able professors "to fill the chairs of the Medical College of Ohio," have obeyed the spirit of the resolution, as they understand it.

Viewing the institution as exclusively a state concern, and believing that opinions ought to be consulted beyond the limits of Cincinnati, the committee addressed themselves to the medical gentlemen of the state generally, through the medium of circular letters. They have the gratification of being able to report, that their communications were received with respect; and the prompt replies which were made to them, bear the strongest evidence of the great interest which the whole profession take in the prosperity of the college.

Your committee submitted two questions for the consideration of those they addressed:—First, as to the probable cause of the depressed state of the institution; second, as to the remedy. Various views of the subject have been given in the answers which have been transmitted, and which are herewith presented; but when scrutinized, the general conclusion seems to be unanimous, that the languishing existence of the college is attributable to the dissentions of the individuals composing the faculty at different periods; and to the want of scientific reputation in the teachers. The hostile influence imputed to the visitation of the cholera has only been intimated in some of the communications from the city.

The remedy suggested is reform or revolution, more or less extensive, according to the individual views and feelings of the writers. The complaints made against the actual incumbents are much diversified: in part they may be based upon personal knowledge, but principally seem to be the result of impressions made upon students during the session, which being widely reported by them on their return to their homes, are thus made to pervade every part of the great valley. The objections, according to the chair against which they are made, may be comprised under the heads of: — defect of elocution and eloquence; want of system and method; too great reliance upon compiled lectures; and last, though not least, a want of social courtesy and accessibleness on the part of some of the faculty. The last complaint, however, the committee is gratified to state, has been mostly confined to verbal communications to them, and is by no means of general application. It is but just to say, that in all the unfavorable opinions given, Drs. Eberle and Cobb are never included. The devotion of the former to the cause of medical science, and his wide spread reputation through Europe, as well as at home, are acknowledged, as making him as ornamental as useful to our infant institution; the latter is considered as filling his chair advantgeously and pleasantly.

A school of mere science depends more for success upon the established reputation of the teachers than any thing else. It is happy for that seminary, which receives students of strong preconceived opinions of the powers of those they are to listen to. Young aspirants after professional education, are not to be considered as very able critics; when placed under the instruction of men, who, by their writings, eloquence, or long services as lecturers, are favorably known to the world, they visit the school to be improved, and they listen to be satisfied. The case is too often the reverse, where the teachers are of unestablished reputation, even with more than ordinary abilities. The student becomes a critic, and is frequently liable to carry away erroneous judgment and false conclusions. Your committee is of opinion, that no college can prosper, without being distinguished for scientific character; and the voluminous correspondence with which they have been favored, together with many verbal communications, leaves the conviction, that according to impressions abroad, this character is not sufficiently pervasive as regards the Medical College of Ohio. It seems to be considered, that the philosophy of medicine is not sufficiently studied: that there is a want of that enthusiasm, that *esprit du corps*, that ambition of professional fame, without which no young institution can struggle through the morning of existence into ultimate usefulness.

In conclusion, in fulfilling the main object of their appointment, viz: "inquiring into the practicability of procuring able professors for the college," they state, that sufficient time has not been allowed to extend their researches very widely. The existing professors not having thought proper to resign, they, of course, are to be considered before the Board, for selection. Dr. Drake is on the spot, but has not signified to the committee that he is a candidate; individually, however, they can say they have no doubt of his acceptance of a chair, under an organization which, in his opinion, might promise to be successful. An exertion has been made to induce Dr. Silliman to accept a situation; this distinguished gentleman, however, after some hesitation, has declined, at the same time recommending in his place, his associate, Dr. Sheppard, advantageously known through New England, as an emi-

nent teacher of chemistry. In addition to this last gentleman, the names of the following physicians have been most favorably reported to your committee, as calculated to give a happy impulse to the Medical College. Dr. Fearn, of Alabama, Dr. Cross, of Kentucky, and Dr. McDowell, now of Cincinnati. Dr. Fearn possesses an enviable reputation as a surgeon, and being a popular man and sound scholar, is considered as likely to use a beneficial influence throughout the south west. Dr. Cross is described as original, impulsive, and energetic, and is a distinguished contributor to some of the medical journals in the East. He has been more than once honored by the prize, for essays composed for the purpose. He is now in France for improvement in his profession, and will return by the autumn. Dr. McDowell made a favorable *debut* in Philadelphia,* as a lecturer, and since in Lexington; and is viewed by his friends as highly gifted and of much promise. He is full of zeal and enthusiasm. The attention of the committee has also been directed to the high claims of Dr. John Locke, of this city. This gentleman is well known, and some of your committee view him as one of the most learned men in the Valley of the Mississippi. Drs. Slack and Whitman, have also been presented. These gentlemen were formerly connected with the college, and are well known. Dr. Rives is also highly recommended by many most respectable signatures.

The organization of the chairs may be considered as properly coming within the duties of the committee; that is a subject, however, of some difficulty and doubt. It ought to be fully discussed before any appointments are made, and if a change in name and number is advisable, the plan suggested by Dr. Drake in his communication, is respectfully submitted, as combining probably the greatest amount of advantages. The correspondence herewith presented is tendered as part of the report.

MORGAN NEVILLE.
J. C. WRIGHT.
L. RIGDON.

At their meeting on the 14th of April, the Board, also appointed another highly respectable fiscal committee, one member of which, Judge Burke, had already served for many years, in the former Board; and on the 20th of May, they likewise reported, and their report was accepted and ordered to be recorded. It reads as follows:

The committee, appointed on the 15th of April, "for the purpose of reporting on the situation of the college to the next meeting of the Board," have made sundry inquiries into the fiscal and other concerns of the institution.

From the best information obtained by the committee, it appears that the claims now existing against the college amount to about twenty-four hundred dollars.

The only source of revenue accruing to the college, is that which arises from sales at auction; and, by a law of the state, this source will cease in the month of June, 1836.

The best estimate which the committee are able to make of the extent of the revenue accruing to the institution during the period of

*Dr. McD. delivered four courses in Cincinnati, one in Lexington, and his last in Philad.

about twelve months, in which time only the right of the college to that revenue will exist, cannot exceed $400 per quarter, or a total amount of $1600—leaving about $800, with the accruing interest, entirely unprovided for.

The committee are unable to advise the Board as to the best method to be pursued, to affect an extinguishment of the claims that must continue to exist, upon the college after the exhaustion of all the means applicable to their payment.

They are led to believe that the institution must, in a great measure, exist upon its own resources, and not depend hereafter upon legislative aid to any great extent.

The large amounts of money heretofore applied to the uses of the college, contrasted with the evident want of success which has attended the institution, has, it is believed, produced a feeling of strong repugnance in the legislature of the state, to afford any further aid; particularly when the opinion generally entertained in that body, for some length of time, has been: that an institution dignified with the name of the "Medical College of Ohio," has but too clearly indicated an arena for the display of local jealousies.

The committee not having been favored by the late Board of Trustees with a schedule of the valuable effects belonging to the college, are unable to give any information as to their extent or cost.

The only paper which the committee have been able to procure touching this branch of the subject, is a report (politely furnished by the present secretary) made to the late Board of Trustees, by the librarian, bearing date the 1st March, 1834, by which it appears that the library then consisted of 1642 volumes.

The committee cannot but believe, that with a proper attention to the interests entrusted to their care—with a fixed determination to promote those interests—having a due regard for their own character and standing, and throwing aside all feelings of a personal nature,—it will be in the power of the present Board of Trustees to exalt the character of the Medical School to such an extent, that the institution will not only be relieved from the present pecuniary embarrassments, but eventually regain the good feeling and fostering care of the legislature.

WM. S. HATCH.
WM. BURKE.
WM. STEPHENSON.

Cincinnati, May 20th, 1835.

The two committees taken together, make a majority of the whole Board, and their reports exhibit perfect unanimity of opinion, as to the depressed state of the institution, and the necessity of reform.

By some oversight of the Board, the memorial and letters of the physicians of Ohio were not read in that body, with the single exception of Dr. Drake's letter, which being referred to by the committee, became as it were an integral part of their report, and may therefore with propriety be published in connection with it. It is as follows:

Vine Street, May 16th, 1835.

MESSRS. NEVILLE, WRIGHT, AND RIGDON:—

GENTLEMEN:—I have the honor to acknowledge the receipt of your circular of the 14th ult., requesting information and opinions relative to the causes of the depressed condition of the Medical College of Ohio, and the means of its elevation. All that I propose to say in reply will be included under two heads—Professorships and Professors.

I. PROFESSORSHIPS.

In every medical institution, the chief object should be the study of the structure and functions (healthy and morbid) of the human body. For this purpose Cincinnati offers great and increasing facilities; and every practicable effort should be made to render them available to students. To this end, the present chair of Anatomy and Physiology should be divided; for the subjects which it embraces are sufficiently extensive to occupy the time and talents of two professors even for a longer time than four months.

Special or purely descriptive Anatomy, is as much as any single man can travel over in one session; and General Anatomy, or the classification of the elementary tissues of the different organs, Pathological Anatomy, or an account of those tissues in a state of degeneracy from disease—and Physiology, or the laws of life, constituting the philosophy of organization, are even more than can be taught by one professor within the same period.

General or Pathological Anatomy are in a great degree the creations of the present century; and now constitute the chief objects of attraction in the celebrated schools of Paris; to which students of medicine and young physicians make visits from all parts of the civilized world. These branches, with Physiology, are the true and proper objects of a chair of the *Institutes;* for every thing besides them, which is usually taught from that chair, belongs to the Theory and Practice. Such a professorship, under the title of *General and Pathological Anatomy and Physiology*, filled by a competent man, could not fail to prove irresistably attractive, and exert on the prosperity of the school, the most beneficial influence.

Every medical school should have an anatomical and surgical demonstrator, who should superintend the manipulations of the students in the dissecting rooms, and direct them in the use of the knife, not merely in dissections, but in surgical operations, an experience which, of course, they cannot acquire by sitting on the benches of the amphitheatre. Indeed unless they handle and apply the instruments, themselves, they never can become expert operators, nor do credit to the school in which they are educated.

All who intend to graduate, should be required as a prerequsite to take a dissecting ticket for one session, and adduce to the faculty, the certificate of their teacher that they had made diligent use of their opportunities. Ten dollars would be a suitable price for this ticket; and if the student took it during the first year of his attendance, he should be allowed to dissect and operate in the second year without any other charge than that for subjects.

When either the Professor of "Special Anatomy" of "General and Pathological Anatomy and Physiology," or of Surgery, might be sick or otherwise necessarily absent, it should be the duty of the Demonstrator to supply his place; and when either of them might for a par-

ticular purpose want any limb or organ from his rooms, it should be forthcoming.

By thus placing four able men on Anatomy (healthy and morbid,) Physiology and Surgery, the whole would be taught in such perfection that the school would rise steadily and rapidly into distinction.

Medical Jurisprudence properly belongs to all the chairs; but still a special course of lectures might be delivered with advantage to the pupils. It would not answer however to create a distinct chair for this purpose, but a lectureship might be established and given to the Demonstrator of Anatomy and Surgery. Five dollars might be charged for the ticket; and every student who intends to graduate should be requested to attend one course, and if it should be in his first year, he should be allowed to attend the second gratis.

A Medical College should have a Chemical Experimenter, who in the absence of the professor should fill his place; assist him in difficult experiments; and receive such compensation as the professor might be able and willing to make. Such a subordinate office would every year make up a class for examinations on Chemistry and Pharmacy, and perform such little illustrative experiments, as his ingenuity might devise; thus promoting the study of Chemistry and acquiring for himself some compensation, made voluntarily by the more liberal or ambitious pupils.

Still further to increase his usefulness and his profits, he might be allowed the use of the Laboratory for lectures in the summer which would contribute to retain pupils in the city (a most desirable object) whether we refer to their own interests, as students, or to the advantages which the school may confer upon the community.

Botany, especially in a new country like ours is an important branch of Medical Education; but as it cannot be taught in winter it is almost entirely neglected. The trustees however may promote its study by establishing a lectureship which might be given to the chemical experimenter who under such a significant expression in favor of this interesting branch of natural science, would be able to make up a summer class; for which he would institute his own price (and which no pupil should be required to attend his lectures) many would be induced to remain in the city, and thus become better prepared for graduation.

Clinical or hospital practice should be divided among the professors of the Theory and practice, Surgery and Obstetrics according to the nature of the cases, and as they might serve to illustrate the rules of practice in those different departments.

Of other professorships I have nothing special to say and will proceed to submit the whole to the Board in a tabular form.

PROFESSORSHIPS.

1. Special Anatomy.
2. General and Pathological Anatomy and Physiology.
3. Surgery.
4. Obstetrics and the diseases peculiar to women and children.
5. Chemistry and Pharmacy.
6. Materia Medica.
7. Theory and Practice of Medicine.

SUB-PROFESSORSHIPS.

1. Anatomical and Surgical Demonstrator, and Lecturer on Medical Jurisprudence.

2. Chemical Experimenter and Lecturer on Botany.

In the University of Pennsylvania, the tuition fees for two courses of lectures, one dissecting ticket and one hospital ticket amount to $260. In the Medical College of Ohio the corresponding expense on the plan just delineated embracing a course of Medical Jurisprudence not taught in Philadelphia would be $225 making a difference in favor of our institution of $35; which is more than enough to defray the expenses of a pupil on his journey from North Carolina a maritime Virginia to Cincinnati.

The difference in the price of tuition between our school and that of Lexington for two sessions including a dissecting ticket in the latter would it is true be five dollars against us, but for this small sum, the student would have the benefit of one, or if he chose two courses of Medical Jurisprudence and of nine teachers instead of eight.

II. Professors.

Can the Professorships and Lectureships of which I have spoken, be so filled as to bring the institution into immediate favor with the profession, and speedily place it on the level of the most distinguished schools of the Union? They certainly can. But to do this, not more than *one-third* of the present incumbents should be retained. That they have not, *as a faculty*, acquired the confidence of the profession in the Valley of the Mississippi, will appear to the Board of Trustees from the following statements of the number of their pupils compared with the number in Lexington, through a series of years; or in other words, from their beginning:

TABLE.

Years.	Cincinnati.	Lexington.
1819	00	38
'20	25	93
'21	30	138
'22	18	171
'23	00	200
'24	15	234
'25	30	281
'26	80	190
'27	101	152
'28	101	206
'29	107	199
'30	124	210
'31	131	215
'32	72	222
'33	102	262
'34	83	247
16	1019	3020

Of the Cincinnati pupils. an average of 12, from 1826 to 1833 inclusive, were beneficiaries, and properly should not be included. The first year of the Lexington School is not added in.

Thus it appears that our school has not averaged more than one-third of the number of pupils of the Lexington school; and that the disparity last year was even greater than the year before. The cause must

certainly be sought for in the relative talents and reputation of the two faculties; for as to local and statistical circumstances, and the expenditure of public money on the *material* of instruction, ours has enjoyed many important advantages over that. Indeed the central situation of Cincinnati, the great facility of intercourse which exists between it and other places; the amount of its population, and the number of its hospital cases, render it the most eligible city in the West for a medical institution, (not perhaps even excepting Louisville,) and present it as second only to Philadelphia. This being the case, it will obviously be practicable for the Board of Trustees to obtain professors of eloquence and intellectual power, devoted to the honor of the profession, and inspired with a love of fame. When this is done it must rise into distinction, but till then will continue to languish.

I have the honor to be, most respectfully,

Your obedient servant,

DAN. DRAKE, M. D.

The president of the Board had, also, in his charge, another letter from Dr. Drake, now on file as a public document, which it is necessary to introduce in this place:

Vine Street, May 19th, 1835.

My Dear Sir,—I intended to have seen you before this time, to reply to your inquiry whether I would be willing to accept of a chair in the Medical College of Ohio, Dr. Moorhead being one of my colleagues; but indispensable engagements have arisen, and are likely to continue, till the meeting of the Board to-morrow.

I thought my mind definitively made up on the question you put to me, but felt it a duty to review the whole matter, and again, converse with my friends upon it, this I have done but all who have expressed themselves are against it. Thus, I am confirmed by the reiterated injunctions of those whom I am accustomed to consult, and feel constrained to say, that I am afraid to venture into the institution with that person. When, *ex necessitate*, I was associated with him in 1831–2, I carried myself in every official interview with whatever discretion, moderation, decorum and courtesy I possess; but in the spring of 1833, when he gave testimony to the commissioners appointed by the governor, he represented me as overbearing, unjust and tyranical. If such was my deportment then it would be bad hereafter; and the peace and dignity of the college require, that I should not come into it, in connection with one who is strongly predisposed to recognize in me those unamiable qualities.

I wish to say explicitely, however, that *I do not and will not, stand in the way of a successful reorganization of the college*, an object which I have much at heart, and that should the Board reject me for Dr. Moorhead, but at the same time, improve the condition of the school, by the election of the able and efficient men, whose names I know to be before them, I will not only do all in my power to induce those gentlemen to accept, and enter the school without me, but I will, to the full interest of my humble means, do every thing to advance its interests, and augment its usefulness.

I am now too old to derive much advantage from a place in the college, as I was not very young when it was projected, 17 years ago; but I shall never be too old, to rejoice in its prosperity and honor.

This letter is private, but should you think, in any stage of the deliberations of the Board, that the reading of it might facilitate the very important measures of reform, which seem to me to be necessary, I beg you to regard it as a public document, and use it accordingly.

Very respectfully, your friend,

DAN. DRAKE.

JUDGE WRIGHT.

With the facts contained in these various documents before them, the Board, at their meeting of the 20th, came up to the task of reform and renovation. It had been expected by many persons, that before the time of this meeting, the professors would have resigned; several members of the Board had individually expressed, in society and even to professors, the opinion that they ought; the committee on the state of the faculty, seem to have entertained the same idea, when they wrote in their report, "the existing professors not having thought proper to resign are to be considered before the Board for selection;" and one of them, under a sense of delicate propriety, had indeed sent in his resignation, but was persuaded by his colleagues to withdraw it; — thus the Board found the professorships all filled, and had either to abandon the work of reform committed to them by the General Assembly or undertake the vacation of the chairs. In this dilemma, the chairman of the fiscal committee, offered a resolution declaring all the chairs vacant. The vote was taken and the motion lost. The friends of the weaker members of the faculty, were of course afraid that they could not be re-elected; and *Drs. Cobb, Smith, and Eberle, had entered into a compact, to remain in or go permanently out of the school together*,* and therefore their friends were opposed to a general vacation of the professorships, lest in the failure of Dr. Smith on a re-election, Drs. Eberle and Cobb might not be at liberty to accept. Thus, as three members could prevent the vacation of the chairs, nothing was yet done.

The process of reform now took a new course, apparently that of declaring, *seriatim*, all the chairs vacant. Dr. Mitchell, with but one dissenting voice, and without any charge of incompetency, was displaced for Mr. Shepard

* We make this statement advisedly, and can prove it.

of Yale College. Dr. Pierson, professor of Mat. Med. in the equal absence of any allegation, was removed, by a unanimous vote; and Dr. Eberle, by a vote also unanimous was (with his own consent) transferred from the Theory and Practice to Mat. Med. and Dr. Drake elected to his place. The next vote was on Dr. Moorhead, professor of Obstetrics, when but five votes appeared against him, and his friends asked for reasons why he should be displaced, although two professors had just been dismissed without any reasons having been assigned! Was it impartial thus to change the rule of action in the progress of reorganization? And if it were done, should not the cases of Dr. Mitchell and Dr. Pierson have been reconsidered? or the justice of the Board defended, by a record on the minutes, of the defalcations and obliquities which rendered their expulsion necessary? But nothing of this kind was done, and the Board adjourned to meet again the succeeding night, having ordered the secretary to inform Dr. Drake and Mr. Shepard of their election.

Let us now ask, why send Dr. Drake a notice of his election and request an early answer, when his letter of the 19th declared that he should not accept, if Dr. Moorhead were retained? and, also, why notify Mr. Shepard of his appointment, when the Board had before them his letter to Dr. Drake, expressly, saying, "I am not willing to enter the school unless you are willing to go in?" Why elect two persons, and inform them of the fact, with a perfect knowledge that neither of them would accept? We confess ourselves unable to answer these questions. None of Dr. Drake's friends, with his knowledge or consent, had nominated him for a place; the committee on the state of the faculty expressly said that he was not a candidate, and his own letter published above, sets forth that he would not serve if Dr. Moorhead were retained, but would support a new and improved faculty without being a member of it.

In thus proposing to remain out of the school, and give it his humble support, as a physician of Ohio, provided it was made worthy of the state, did he not make all the sacrifice in his power? Was there any thing more he could have

done? And should not this have defended him from an election and the clamor attempted to be raised on his non-acceptance? Did he stand in the way of a reorganization of the school? Is he censurable for the signal failure that has taken place? Is it he who has disappointed the hopes of the profession? For what purpose then, we once more inquire, send him and Mr. Shepard notices of their appointment, and permit one of the professors to communicate it for publication in the gazettes? The medical reader must answer this question for himself.

But what should be thought of the policy of attempting to combine Dr. Moorhead and Dr. Drake in the same faculty? All the members of the Board were acquainted with the fact, that from the first year of the emigration of Dr. Moorhead from Europe to Cincinnati, he had been Dr. Drake's unrelenting enemy; they all knew, that as late as the month of January last, he was one of the authors of a most bitter publication against Dr. Drake, entitled "Facts concisely stated," etc. Should they then have expected any thing but discord from placing the two in the same faculty? And yet, did not the committee, in their report above inserted, expressly recognise this as the first in point of rank, of the causes which had hitherto retarded the prosperity of the school? It is not necessary to the success of an institution, that the professors should be personal friends; they may even dislike each other — but their animosities must not generate quarrels, nor interfere with a hearty co-operation in every thing calculated to advance the interests of the school. Was it expected by the intelligent people of Cincinnati, and the physicians of the city and state, that Dr. Moorhead and Dr. Drake would be brought together in a new and improved faculty? Was it generally desired and recommended by them? We fearlessly declare it was not; and without having seen one of the letters written by physicians of the state to the trustees except our own, we confidently appeal to them to bear us out.

But Dr. Drake's refusal to serve with Dr. Moorhead, arose only in part from the fear of being involved by him in dissensions. He wanted confidence in Dr. Moorhead as a professor, and believes that our physicians did not, either in their

letters or verbal communications to the Board, indicate him as one that *ought* to be retained. For six or seven years, he held the leading chair of the school, the Theory and Practice, during which it was so low, that the trustees, some of them his personal friends, found it necessary to transfer him to Obstetrics, one of the easiest chairs of a medical school; and even in that, he did not acquit himself with such ability as to rise above the second grade. He was, indeed, one of the three professors whom Drs. Eberle, Cobb and Smith declared, in the winter, must leave the school, and was, likewise, among those whom the committee on the state and character of the faculty inform us, the profession of Ohio, had *not* excepted from the proscription, which they considered as indispensable to the success of the school.

Thus, in thinking that two members of the Faculty, only, should be retained, Dr. Drake is with his brethren of the state, and although all the odium of cherishing this opinion may fall on him, he will find the burden light, as long as he is sustained, by knowing that he is with the respectable profession of the most populous state of the West.

Dr. Drake does not cherish of himself the opinion, that his entering the college could raise it, in opposition to a dead weight of incompetent colleagues. He did not choose to venture into the water to save it from drowning, and sink with it. He presumed himself at liberty, as a citizen of Ohio, to judge, while out of the school, of the propriety of entering it; and to make a decision, without having his right to do so, called in question by any of the trustees; or without having his refusal denounced by them, as dictation or obstinacy. In this, however, he was mistaken, as individual members of the Board, have felt themselves at liberty to censure him for not accepting; as though he had knocked at the door for admission, knowing who were already in, and when it was opened, had refused to enter.

But let us return to the proceedings of the Board, at their second meeting, which was on the evening of the next day after the first sitting. At this meeting the motion for vacating professor Moorhead's chair, was again made, when

Messrs. Hatch, Rigdon, Dunlavy, Carter and Fletcher, three of whom reside in the country, voted in the affirmative, and Messrs. Wright, Burke, Stephenson and Este, (the last elected the night before to supply a vacancy,) voted in the negative. Five to four, and of the four Mr. Stephenson declared the next day, that from what had been manifested as to the public sentiment of the profession, Dr. Moorhead ought not to be retained, and that he only voted for him, because no person was presented to supply his place, whom he thought eminently qualified. Thus he was, in fact, supported by three members only, two of whom Messrs. Burke and Este, had for several years been members of the old Board, and cherished the opinions and feelings of that body! Immediately after the results of this second vote were declared, a member who had been charged with Dr. Drake's reply, presented it to the Board, when it was read as follows:

Vine Street, May, 21st, 1835.

Sir,—I have the honor to acknowledge the receipt of your official note of this morning, announcing my appointment to the chair of the "Theory and Practice of Medicine" in the Medical College of Ohio.

In replying, I feel embarrassed by not having before me any official information, as to the persons who would be my colleagues; but report represents, that the honorable Board of trustees have retained two thirds of the old faculty. If this be the case, I shall feel it a duty to the profession and myself, to decline the appointment with which I have been honored; having a settled conviction, that the school cannot be raised from its present depression, if more than two of the professors, to whom its destinies have been confided, should be retained.

If the Board, in their wisdom, should think proper, to supersede two thirds of the late faculty, with new incumbents; and professor Moorhead should be among the displaced, they may consider me as having accepted, and that I shall stand ready to execute to Mr. Shepard a guaranty, of two thousand dollars per annum for three years, the condition proposed in my letter to professor Silliman, on which his consent to accept a professorship was obtained.

Most respectfully, your obedient servant,

DAN. DRAKE.

C. FLETCHER, Esq. *Sect'y.*

This reply, which seems on the face of it to be sufficiently clear and explicit, was followed by an adjournment *sine die;* and it was said by some members of the Board, that Dr. Drake and Mr. Shepard would probably both accept! It will be observed by a re-perusal of this answer, that the chief con-

dition which it sets forth is, that two only of the faculty should be retained, and these were understood, to be Drs. Eberle and Cobb. It does not ask the trustees to make up the faculty of men nominated to them by Dr. Drake. It does not *require* that the professors just named should be retained. And still, *some* of the members of the Board, have promulgated, in society that Dr. Drake, would not enter the school unless, the chairs were all filled by his dictation. Had he seen proper to designate the persons with whom only he would serve, he had a legal and social right to do so, without offence to the trustees; but he did not, he merely indicated, that he could not successfully aid in raising the school from its state of depression, if more than two of the old professors were retained, and Dr. Moorhead should not be among the number dispensed with. For this it is, that his conduct is daily assailed in the streets by two or three members of the Board. We should think that an experience of twelve years, might have taught the Board, that other means than the abuse of Dr. Drake, are necessary to the elevation of the school. He had defended himself against misrepresentations through that long period, and with all the freshness of earlier years, proposes to do it now and hereafter. Two years ago, he made a successful defence against the whole Board, sustained by the whole faculty; and feels, but little solicitude in a conflict with a small minority, who have taken upon themselves the hopeless task of perpetuating abuses, to which two of them were parties in past times: He thinks the medical gentlemen of Ohio, (and even himself) as good judges of what is necessary for the school, as two or three gentlemen not of the medical profession, however respectable they may be as members of society: He believes that no medical college can flourish, without the confidence and support of those who are to direct the choice of schools for their pupils: He has been so long in the profession, that he feels it a duty, *when circumstances created by others* call him out, to speak faithfully and fearlessly: He respects his profession, and will not, knowingly, compromit its interests and dignity: They who violate the high trusts confided to them by the state, will, as

heretofore, be exposed; and they who expect to silence him by raising a clamor, will be disappointed.

Dr. Smith was one of those, whom Dr. Drake regarded as of secondary rank in the school. He is speaking of the professor and not of the man. He has satisfied himself, that as a lecturer, Dr. Smith is inferior to Dr. Cobb and Dr. Eberle. He knows that Dr. Smith, although at the meredian of life, had not a reputation beyond the limits of Kentucky, where he had resided for some years, when he was elected into the college; and he has ascertained that there has been a falling off of nearly one-half, in the number of pupils from that state, since Dr. Smith came into the institution. In the session of 1831-2, Kentucky furnished 32 students, when the class was 131; the united classes of the two years since Dr. Smith came to the school, have amounted to 174, but the number of Kentucky students in the same two years, from the best accounts we have been able to obtain, (the class being so small last year, that no catalogue was published,) did not exceed 24 or 26, when it should have amounted to 42, to have been in the proportion of the year 1831-2. Even as far back as the session of 1827-8, the school had 20 Kentucky students, in a class not exceeding 100. Dr. Smith is not among the professors indicated by the physicians of Ohio, in their letters to the committee, as up to the mark; nor have the committee intimated any thing in his favor. Dr. Smith came into the school, when it was in a most unsettled condition, as an inquiry into its history and prospects was at the time pending in the legislature, he has expended no money on it, brought no pupils to it, and has no claims to be retained, if an abler and more influential incumbent can be found. Such an one, Dr. Fearn, of Alabama, was indicated to the Board, by the committee, and he was recommended among others by Dr. Shotwell, of this city, Dr. Cartwright, of Natchez, President Woods, of the University of Alabama, Mr. McKinley and Mr. Murphy, members of Congress from that state, Judge Crawford, of the Federal Court, Governor Gayle, and Professor Griscom, of New York — the whole of them in as high a strain of eulogy, as men of sense would allow themselves

to utter. The place of residence of Dr. Fearn had, moreover, much to recommend it, as but few pupils have yet come from the South; and Dr. Drake did not, could not doubt, that he would be a great acquisition to the college, compared with the present incumbent, whose very name was unknown to the profession of Cincinnati, when he was elected. Dr. Drake is aware of the argument for the retention of Dr. Smith, founded on the personal disadvantages to that gentlemen of a removal; but are the personal inconveniences to Dr. Mitchell and Dr. Pierson, of less magnitude? Dr. Drake does not admit, that such considerations should weigh against the public good, and believes that the duty of Trustees has only been faithfully performed, when they have appointed the ablest men within their reach. He was anxious and willing to co-operate with the Board in obtaining men of the highest qualifications, and, with an inconsiderate zeal, offered pecuniary guarantees, endorsed by his friends, to four gentlemen, in the aggregate amount of thirty thousand dollars, to accept professorships, provided the Board should appoint them; but he did not make it a condition to his going into the school, that any of these eminent men should be chosen; he, on the contrary, told the Board that if they would reform the school, by the introduction of these or others, whose names were before them, he would, if Dr. Moorhead *must* be retained, remain out, and labor with other members of the profession for its elevation.

But let us go on to the called meeting of the Board on the 4th of June, inst. At this meeting an attempt was made to restore Dr. Eberle to the chair of Theory and Practice, which failed, and the Board adjourned to the next morning. Mr. Garrard of Cincinnati, was then elected to supply the place of Mr. Dunlavy of Lebanon, who had resigned, but the Board again adjourned, without accomplishing any thing. At night they still failed to retransfer Dr. Eberle from Materia Medica to the Theory and Practice, when they passed a resolution, delegating to the Faculty the power of assigning the duties of that chair to one or more of their own body, and adjourned for a week. The next day the Faculty met, and assigned

the duty to Dr. Eberle, who is thus *professor* of Materia Medica, and *lecturer* on the Theory and Practice, the chair which he lately held; which is now vacant, and manifestly is expected to remain so for the next session, or the Board would not have directed the Faculty thus to dispose of the duties. Having done this, they adjourned for a week, to receive the answer of Mr. Shepard, who had previously declared that he would not accept unless Dr. Drake should do the same.

On the 12th inst. the Board again assembled, and had Mr. Shepard's reply, asking for information on several points, one of which was whether Dr. Drake would enter the college. The secretary was instructed to give the information required, and the Board adjourned for three weeks to await his final answer. This will carry on the disorganized state of the school ixto the month of July, when, should that gentleman finally decline, two of the chairs must still, as at the present time, remain vacant, with an apparently fixed determination on the part of some of the members of the Board, to suffer them to continue so, until resignations take place, and a thorough renovation can be effected.

Such is the history and present state of the project of reforming the Medical College:—a work suggested to the members of the legislature, by a large proportion of the physicians composing the Medical Convention, assembled last winter in Columbus;—prosecuted by the General Assembly, in the election of a new Board of Trustees;—declared to be indispensable, by one-hundred and thirty-six physicians of the state, in a memorial to the Trustees, *not met by a single opposing name;*—forcibly indicated, as necessary, by letters from more than forty physicians of the state, written in reply to a circular of a committee of the Board, which declares the school to be actually in a depressed condition; finally, pointed out as indispensable, by two committees of the Board, inserted in the first part of this article, the six members composing which committees, make up a majority of the whole Board—of which six, one-half, arrayed themselves against any further changes, than the dismissal of Dr. Pierson, one of the most

learned and amiable of the Faculty, and Dr. Mitchell, acknowledged to be one of the ablest lecturers of the school! The result of the whole operation is this — the Board have published to the world, that the Faculty, it is true, are incompetent, but that the fewer incompetent men it contains, the better; and that, therefore, by reducing the number from six to four, they have improved its condition. As public journalists in the profession, we set forth this result for the information of students. EDITOR.

Cincinnati, Ohio, June 24th, 1835.

Origin of a second School.

The proceedings of which we have given a documentary narrative, were originated and prosecuted, by a Board of Trustees, most of whom had *not* been designated to the General Assembly, by the friends of College Reform; they were indeed, appointed on the last day of the late session, and taken in some degree hap-hazard. Thus they were not *the* Board of the reformers; but a compromise between the reformers and conservatives in the Legislature. Still, it is well known, that a decided majority of them were of *opinion*, that extensive changes in the Faculty of the College, were indispensable to its revival and future usefulness; and we do not entertain a doubt, that if the professors had resigned and taken their chance for re-election, a new and able faculty would have been made up. We have seen that this was not done, and that by the effort at reorganization, the College was unexpectedly brought into a condition, that seemed likely to reduce its next class still lower than the last, if not, indeed, for a year to close the doors. Thus as new institutions were starting up in different towns of the West, there was the utmost danger, that Ohio would lose the opportunity of perpet-

uating a good medical school, although she had been the second state, in the Valley of the Mississippi, to commence medical instruction; and had given more public money to the object, than all the Western states besides. Now there were citizens of Ohio, both in and out of the profession, who could not but feel great inquietude at this prospect; and they believed it a duty to prevent if possible, the loss to the state and city, of what had been expended by the former within the latter, on this important object. It was *this desire*, that gave birth to a new school. They in whom it existed, thought that if some other corporation, would take up the subject of reform, it might ultimately be accomplished, and a single good school secured to the state.

In this exigency, the Cincinnati College offered a resource, and it was forthwith drawn upon. A general meeting of the Board of Trustees, 20 in number, was called, and two thirds obeyed the summons. Of this Board, a fifth part reside in the country, and several are physicians. The meeting having been organized, Dr. Joshua Martin, of Xenia, offered the following preamble and resolutions:

"Whereas the recent attempt of the Medical profession and the General Assembly of Ohio to reorganize and improve the condition of the Medical College of Ohio, have, as we are informed, been unsuccessful, (the Board of Trustees of said College, having adjourned *sine die*, leaving two or three of its professorships vacant) and whereas there is the utmost danger, that Ohio will lose the advantages of a Medical institution, unless immediate measures be taken to organize a substitute for said College; therefore be it

Resolved, That this Board will proceed forthwith to establish a medical department of the Cincinnati College.

This preamble and resolution were on motion of Mr. Morris, referred as follows: "*Resolved*, That the preamble and resolution submitted by Dr. Martin, be referred to a committee of five members, with instructions to inquire into the expediency of the proposed measure and report to the Board the most suitable mode of carrying said resolution into effect."

Whereupon Dr. Joshua Martin, Ephraim Morgan, Albert Picket, Dr. William Mount, and William R. Morris were appointed that committee.

At the next meeting of the Board, the committee submitted the following report:

"The committee to whom was referred the consideration of the expediency of establishing a medical department in the Cincinnati College, and the best mode of carrying the same into effect, have had the subject under consideration, and beg leave to report to the Board—

That your committee are satisfied that from the peculiar situation in which the Medical College of Ohio is placed at this time, the interests of the state and especially of this community require, that this Board should immediately create a medical department, and appoint a medical faculty; and your committee, therefore, recommend that the following chairs be created to be filled by the persons whose names are respectively attached."

In making their appointments, the Board acted with fidelity to the principle on which they had started. Selecting Dr. Eberle, Dr. Cobb and Dr. Gross from the Medical College of Ohio, they united with them, in the completion of the Faculty, no gentleman who had not been strongly recommended to the Board of Trustees of that institution, by its own committee; and thus sought (to repeat the expression of an idea) to finish what the trustees of that institution had begun, but had been unable to accomplish, although an actual majority of the Board were in its favor.

Thus it was not the design of the Cincinnati College to set up a permanent rival, for their professors were at liberty to resign, and the whole of them, had they all accepted, might by a simple resolution of the trustees of the Medical College of Ohio, be transferred to that institution. At the same time, it was and is the determination of the trustees of the former, as we have intimated in the preceding article, to render their medical faculty permanent and respectable unless it should be invited into the other institution and wish to go. Their corporate powers are those of a university, as will appear from the following extract from their charter, granted in the same month and year, with that of the Medical College of Ohio:

"Sec. 6. *Be it further enacted*, That the Board of Trustees of the said College may grant and confer on any candidate, in such form as they may direct, all or any of the degrees that are usually conferred in any College or University within the United States."

They had in charge an ample and commodious edifice, in the centre of the city, which can be advantageously appropriated to the accommodation of pupils; and they saw and felt, that unless something should be immediately and effectually done, in the establishment of a medical school on sound principles and with the requisite number of professors, there would in all probability be no public medical instruction in Cincinnati next winter, and the pupils of Ohio, be under the

necessity of visiting distant universities or of foregoing the advantages which they confer.

It may be proper here to remark, that the medical schools of the United States, generally, are departments of Colleges and Universities, designed for instruction in literature and science, at large, like the Cincinnati College; and that the Medical College of Ohio is perhaps the only separate and independent medical school in the United States.

Such were the patriotic motives which led them to engage in this enterprize, and will hold them to its unwavering prosecution, unless a better policy should arise in the Board of the Medical College, and those whom they have appointed, be provided for in that institution. To this transfer they have, in their individual and private character, constantly expressed a perfect willingness; for they have no personal interest in maintaining their new department; and are the friends and neighbors of the trustees of the Medical College of Ohio. Still having put their hand to the plough, they will not look back; but have evidently resolved, to persevere until the great object of establishing in Cincinnati, a Medical school, that shall be worthy of the state of Ohio, creditable to the city, and beneficial to the West, shall be fully accomplished.

CINCINNATI COLLEGE.

MANIFESTO.

The Board of Trustees of the Cincinnati College, beg leave to announce to the public, that they have recently instituted and appointed a MEDICAL FACULTY. In doing this, they consider it proper to state to their fellow-citizens, the motives and reasons; which have moved them to engage in the enterprize.

At a meeting of the Board, on the 22d of May, it was shown to them on authentic and satisfactory testimony, that the General Assembly of Ohio, at their late session, had appointed a new Board of Trustees for the Medical College of Ohio, with the apparent design of effecting a reorganization of the Faculty of that institution; acknowledged by the Board, and declared by the physicians of the city and state generally, to be in a depressed and unprosperous condition; that after three meetings of the Board, they had been able to proceed no further in the work of reform, than to vacate two of the important professorships; that they had been unable to fill them with new incumbents who would accept; that the country members had returned home, after an adjournment, *sine die*, with the apparent determination to insist on certain resignations in the Faculty, as the condition on which they would again come up to the work of reform; that no resignations were likely to take place, that the College was, therefore, in a reduced and disorganized state, and that one of its ablest professors had expressed the apprehension, that its doors would be closed the ensuing winter. Under these circumstances, the Trustees of the Cincinnati College, could not fail to perceive, and as citizens of Ohio to regret, that the state was in danger of being deprived, at least for the ensuing winter, of the advantages of a good medical institution; and her sons brought under the necessity, in greater numbers than heretofore, of seeking instruction in the distant schools of other states.

To prevent this necessity, was the great object of the Board in organizing a medical department; and as the same condition of the Faculty of the Medical College still exists, after the lapse of several weeks, when more than half the term of the college vacation has expired, the Trustees of this institution, referring to the interests of the profession, of the state and of the city, have much reason to be gratified with what they have done.

They would inform the physicians and students of the West, that they will be able to afford the department an edifice every way calculated for the convenience of both professors and

pupils; and that their chartered powers and privileges are the same with those of the University of Pennsylvania, Maryland, or Transylvania, as it respects the creation of a Faculty of any kind, or the granting of correspondent degrees.

In organizing a medical department, the Board, relying on the advice of such of its members as belong to the medical profession, have aimed at making it as full and perfect, in respect to the number of chairs, and the variety of sciences to be taught, as any other medical school in the Union,—and in regard to the character and qualifications of those whom they have appointed as professors, they will say, that the gentlemen have the confidence of the Board, and will, it is not doubted, meet the approbation of the physicians of the West. The titles of the professorships, the names of the professors, the terms of tuition, and all other matters interesting to students, will be set forth in the circular of the Faculty, to which the Trustees beg leave to refer the profession.

By order of the Board.

WM. R. MORRIS, President.

ROBT. T. LYTLE, Sec. pro tem.

Cincinnati Ohio, June 27th, 1835.

CINCINNATI COLLEGE.

MEDICAL DEPARTMENT.

The session will open on the last Monday of October, and continue to the end of February. Full courses of Lectures will be delivered on all the branches of the profession.

SPECIAL AND SURGICAL ANATOMY,
BY JOSEPH N. McDOWELL, M. D.

GENERAL AND PATHALOGICAL ANATOMY, PHYSIOLOGY AND MEDICAL JURISPRUDENCE,
BY SAMUEL D. GROSS, M. D.
(Late of the Medical College of Ohio.)

SURGERY,
BY HORATIO G. JAMESON, M. D.
(Late of the Washington Medical College, Baltimore.)

OBSTETRICS AND THE DISEASES PECULIAR TO WOMEN AND CHILDREN,
BY LANDON C. RIVES, M. D.
(Late of the state of Virginia.)

CHEMISTRY AND PHARMACY,
BY JAMES B. ROGERS, M. D.
(Late of the Washington Medical College, Baltimore.)

MATERIA MEDICA,
BY JOHN P. HARRISON, M. D.
(Late of Louisville, Kentucky, now of Philadelphia.)

THEORY AND PRACTICE OF MEDICINE,
BY DANIEL DRAKE, M. D.

ADJUNCT PROFESSOR OF CHEMISTRY AND LECTURER ON BOTANY,
JOHN L. RIDDELL, M. A.
(Late of the state of New York.)

Six Lectures will be delivered daily, throughout the session.

Mr. Riddell will teach a private class on Chemistry, by examinations and familiar modes of illustration. His lectures on Botany, strongly recommended by the Trustees and Faculty, but not requisite to graduation, will be delivered in spring and summer.

The price of the ticket of each professor will be fifteen dollars, making an aggregate of one hundred and five — the matriculation fee two dollars — the dissecting ticket ten dollars, and the graduation fee twenty dollars.

Those who intend to graduate must take the tickets of the professors before the 20th of November. No student will be admitted to examination for a degree who is not 21 years of age; of good moral character; has not studied medicine with a private preceptor for three years including the time of his attendance on the lectures; and has not attended two full courses in this College, and taken the dissecting ticket once, or one in some chartered institution, having not less than five professors, and another in this college; but physicians who have been in separate practice four years, may become candidates after attending a single course. Students who attend two courses, and do not wish to graduate at the end of the second term, may continue to attend thereafter as long as they choose, by paying the matriculation fee only.

Clergymen having a pastoral charge, who are desirous of acquiring medical knowledge, but do not intend to change their profession, may attend the lectures gratuitously.

Students and attorneys at law, who wish to avail themselves of the benefits of the lectures on Medical Jurisprudence, can obtain tickets to that course, by paying five dollars each.

Graduates of all other regularly organized and legally authorized medical institutions, will be at liberty to attend the lectures in this institution gratuitously.

The Board of Trustees have furnished the Faculty with ample lecture rooms, in their capacious and central edifice, where those who wish to prosecute practical anatomy, will, under the superintendance of the professor of Special and Surgical Anatomy, be furnished with commodious apartments and all desirable facilities. These apartments will be opened the first of October, to afford students who may desire to engage, personally in operative anatomy, without being interrupted by lectures, the requisite opportunities.

The united cabinets of anatomy — healthy and morbid, human and comparative — of Dr. McDowell and Dr. Gross, will be found extensive, diversified and instructive; and as it is the fixed purpose of the Faculty to render their school eminently anatomical, they intend to adopt such measures as will effect a rapid augmentation of the museum of preparations.

Various courses of lectures by four of the professors, and several gentlemen out of the school, are now delivering and will be continued till the regular session commences in autumn. These lectures are preparatory to the establishment of a permanent summer school, and for this year are gratuitous.

In conclusion the Faculty will add, that every Sunday morning of the three last months of the session, the professor of the Theory and Practice, will deliver a dis-

course on the social, moral and religious duties of students and medical men; which of course the members of the class will be at liberty to attend or decline, according to their respective tastes.

By order of the Faculty.

DANIEL DRAKE, M. D., Dean.
Medical Faculty of Cincinnati College.

Cincinnati, Ohio, 30th June, 1835.

To the Friends of Cincinnati Medical Reform, in Ohio and the West generally.

The object for which you have labored, an improved condition of the Medical College of Ohio, has as you have just read, not been attained, and a new school has been organized. No one pretends to doubt, that the legislature of Ohio, in appointing a new Board of Trustees, had distinctly in view, a reformation of the College. The professors, however, did not think proper to resign, and some of those whom it was generally expected would not be thought qualified for retention, have been kept in, because eight votes out of eleven could not be got to replace them with abler men. It is far from being my intention to question the judgment of the gentlemen, all highly respectable and intelligent, who thought four out of six of the Faculty worthy of being retained; but I am as little disposed to admit that, I myself, am censurable; for not thinking in the same way, or for accepting a professorship in another corporation. If the Medical College of Ohio had been prosperous, such a project would not have been undertaken, at least by those who *have* engaged in it. As it is not prosperous, no harm can come to the interests of the profession from a new school. The Cincinnati College has taken nothing from the Medical College of Ohio, and, therefore, deprives our students of medicine of no advantages which that institution could afford. As to anatomical subjects, it is well known that enough are attainable for two schools. Then, who is or can be injured by the new school, but the professors of the old? the fear of which, perhaps, may impel them to greater efforts than heretofore, and thus the students who choose to return to that college will be better taught—for which they may thank the new project.

It is unquestionably not the policy of the state to grant a monopoly of any kind, and especially one, which is charged with the interests of education. We can, at this moment,

recollect no less than six chartered institutions which have the *franchises* necessary to the creation of Medical Faculties, and there may be several others. A number of these have been chartered since the establishment of the Medical College of Ohio. It is the policy of the state, then, to encourage salutary emulation, to multiply the places and means of instruction, and to raise our young men above a dependence on a single institution, which becoming defective, may disappoint their hopes. Indeed, the constitution of Ohio expressly requires of the legislature to set its face against all monopolies in education, and instructs them to afford equal chartered privileges to all the citizens of the state, in the following section of Art. 8th:

"SEC. 27. That every association of persons when regularly formed within this state, and having given themselves a name, may, on application to the legislature, be *entitled* to receive letters of incorporation, to enable them to hold estates, real and personal, for the support of their schools, academies, colleges, universities, and other purposes."

Such has been the policy of the state for a third of a century — that is, for an age; such is the supreme law of the land; such the understanding which all our legislatures have had of their duty; — and if so, may not corporations already in existence, and even private associations of individuals, regulate themselves by the same principles? I will illustrate this matter by a few examples.

Within two miles of this city, there is an incorporated institution entitled LANE SEMINARY, expressly designed for Presbyterian theological studies. Now what would have been thought, if its professors and trustees had opposed the recent establishment of another school of the same kind, by the trustees of Oberlin College, on Lake Erie? or what would be thought of Dr. Beecher and his colleagues, if they were to set out and oppose the establishment of a theological department in the Cincinnati College, to be placed under the direction of Dr. Wilson? Again, suppose that a law school had existed in Cincinnati, the teachers of which were so incompetent, that the Bar of Ohio sent their pupils to the schools of Lexington and Litchfield, would society have frowned upon Judge Wright, Mr. King, and Mr. Walker, for setting up a better one, and drawing law students into Ohio, while the other drove them out? Still further, our legislature, several years ago, chartered an Insurance company in this city, and since have chartered two others; but who ever heard that Mr. Neville and his associates in the first, were disposed or felt themselves at liberty, to remonstrate against the estab-

lishment of the others? Finally, after the Ohio Mechanics' Institute was chartered by the legislature, that honorable body, on application, created the Cincinnati Lyceum, both designed for popular instruction, by means of public lectures on any branch of human knowledge; but did Mr. Foote, Mr. Graham, Mr. Fletcher, and Mr. Bonsall, oppose this proceeding? or will any one pretend they ought to have interfered? I think not, and still, as the Institute was prosperous, they would have had more right and reason on their side, than would belong to the Trustees of the Medical College of Ohio, should they oppose the establishment of a second medical school, when they have failed to give respectability and usefulness to the first.

The professors of our *alma mater*, the University of Pennsylvania, were violently opposed to the institution of the Jefferson Medical College; but the legislature of Pennsylvania, governed by broader views, went ahead; and what has been the effect, but the assemblage, last winter, in Philadelphia, of 600 pupils, when something more than 400 had been the most that had ever attended before the organization of the second school! And who will say, that the lectures in the University, have not been made more spirited and instructive by the rivalry?

One third of the population of the United States is in the Valleys of the Mississippi and the Lakes, while the whole region has but two schools, one of which has been pronounced by the profession of the state whose name it bears, and by a large majority of the physicians of the city in which it has been in operation for fifteen years, and by its own Trustees, to be utterly defective—a sentence which is confirmed by the small number of its pupils. Is there no need, then, of reform, or of a better school? Shall there be fourteen medical schools among eight millions of people in the other states, and a ban put upon those who would have more than two, for four millions in the West, when one of these two is so unattractive as to be the ninth or tenth school in the Union, in the number of its pupils? Kentucky, with but two-thirds of the population of Ohio, gave to her own school, last winter, one hundred and twenty students, at least double the number of *all* the pay pupils in the Ohio school from every quarter! I state as a fact, that a medical gentleman declared, at the Columbus convention of physicians, in January, that he knew, in the county in which he resided, and in an adjoining county, no less than eight students of medicine, who were in attendance on lectures in eastern schools! And this too after our

state had given thirty-six or thirty-seven thousand dollars for the establishment of a college at home. Shall it be said that this college has not yet attained to puberty? It may not in functions, but certainly has in years. Early and rapid development is the constant effect of the warm moral and social climate of the West; and where there is any thing to come forth we see it unfolded betimes. Thus the third class of the Kentucky school comprised 138 pupils, which is more than the Ohio school has yet numbered. The sixth class of the former reached 282—the twelfth of the latter was 200 less! When the 282 assembled, they found themselves in what had been the bar room of a tavern!—there was no public edifice—the state had not, and has not since, given but $5000; while all the circulars of our college have set forth the munificence of Ohio, and the magnitude and splendor of the college edifice, the attractive front of which, has more than once been engraved, at the expense of the state, and sent abroad in books, and newspapers, as a substitute for the fame of the professors. Unfortunately for those who relied on this artifice, students attend medical schools to be instructed, not to sit in splendid edifices;—to listen to the eloquence of professors—not to admire the beauty of the columns, which adorn the empty and echoing halls. The Jefferson Medical College was instituted in 1825, five years after the Medical College of Ohio; without any endowment from the state of Pennsylvania; and under the very walls of the venerable and popular university, which is honored with the name of the state, and cherished by the wealth and moral power of the city; and still, with all these disadvantages, it has already attained to three times the number of the Ohio college, placed in a spot more favorable to the building up of a great school, than almost any other in the Union.

It has been said, however, that I ought to have re-entered the college, and waited for its expurgation at a future time. But if it had not flourished after I went in, would not my friends have been taunted with the failure, and mortified at the result? If it had flourished even to a moderate extent, would the Board of Trustees *then* have thought of making further removals? And could any removals have been attempted, without involving me in the charge of having instigated them? The fact was and is, that if I had entered the school with a particular set of colleagues, it would have been my duty to sustain them. While out of the institution, I might co-operate with the friends of reform, but once in, I must stand up for my associates. On all these points, I have not been allowed to judge for myself. I have been erected into a phenomenon—a teacher able to raise the school into immediate distinction, but still unqualified by my talents and sagacity to judge whether its organization was such as would be successful! I have been made a very Hercules—capable of performing wonders, but incapable of judg-

ing when or where, they should be wrought. Not claiming, however, to wield the club of Hercules, I do not entirely adopt his character for stupidity. Indeed, I consider myself better qualified to judge of the means necessary to success in a medical school, than to teach one of the departments; and think that those respectable gentlemen, not of the medical profession, who have done me the honor to say, that I would be a great acquisition to the College, might, without inconsistency, have admitted, that such an one must have some ability to judge whether its organization was good. They have, however, thought otherwise, and a new school is the first fruits of their decision.

So much for the necessity of a revolution in the affairs of one college, and in explanation of the reasons for instituting another school. But it is said, here in the city, by those interested in keeping themselves in the college, that the new project is ephemeral and designed merely for effect. I reply, that it *is* ephemeral, but in the same sense that a nation is ephemeral, compared with the human race; and that it is, in truth, for effect—the effect of assembling together those pupils who desire to study the science profoundly, and of teaching them with diligence. It is bruited abroad still further, that the undertaking is another manifestation of "*Drake's unhallowed ambition;*" to which I reply, that it would be well for the profession, if the charge of ambition could be justly brought against some of his cotemporaries. Yet farther, it has been insinuated, that I have deluded a few persons into the measure, and that they will soon get their eyes open to the dangers of the enterprise, and abandon it. In answer, I state that I came into the project on the persuasion of many respectable persons, both in and out of the profession—of the country as well as the city—and that they are quite in earnest. All who doubt this assertion, need but await the rapid development of events to be convinced of its truth. Some unforseen obstacles may *perhaps* lie in the way of this development, and require to be thrust aside, or trampled under foot. Well! be it so. I have lived too long in the West to need a macadamized road for any journey, and look upon the difficulties that may be encountered as mere stimulants to effort, like the wounds inflicted by the thorns and nettles of the thicket, which quicken the footsteps of the young Backwoodsman, but never "turn him on his heel."

The new school, it is said, will put the physicians of the city by the ears. But why should it? Have our medical gentleman no more dignity and self respect, than to allow such an event to involve them with each other? For what purpose should they go into a quarrel? If there must be quarrelling, let those who are to enjoy the spoils of victory carry on the foray. Let the professional and other gentlemen of the city, harmoniously mount the scaffold of observation, and amuse themselves with the *Avaritiæ adversus gloriam certamen*, and the quiet of the community will be disturbed in no other way, than by the thunderings of rival lecture rooms: In them the battle must ultimately be decided, and there it might as well begin.

I have been told that I ought to be associated with Dr. Eberle and Dr. Cobb. In turn, I say, Dr. Eberle and Dr. Cobb ought to be associated with me. I am the oldest man, (whatever may be their superior reputation,) came into the West before either of them was born, and founded the College before Dr. Cobb even commenced the study of medicine. Notwithstanding this, for several months past, I sought a union with them, and as they professed a desire to see me in the Medical College of Ohio, repeatedly sent messages, proposing to them to resign and unite with the friends of reform and myself, in building up, in that corporation, a new Faculty, in which they should have the same chairs they now fill; but they were both afraid to relinquish their places, although they declared, they would resign, if at least half their colleagues were not put out. If they wanted moral courage to do what they themselves thought necessary to the consolidation of parties, the establishment of one respectable institution, and the restoration of harmony in the profession, I am not to blame. When the new Faculty of the Cincinnati College was instituted, they were on my own recommendation offered places, which they declined, although they must have known that their acceptance would have been followed by an immediate vacation of the remaining chairs, and a transfer of the newly organized Faculty to the institution they had just left. Thus, I could not become associated with them, except under circumstances which they

had declared, would prevent their remaining in that institution! I make this statement that the friends and pupils of those gentlemen may know, that efforts were made to embrace them in a new organization, rather than to deplore their want of concurrence. Neither of them, nor any other single man, is a *sine qua non* to the success of *any* medical institution, and the Cincinnati school *shall* succeed without them. If they should do hereafter, what they have not done heretofore, raise the Medical College of Ohio into respectability, we shall have *two good*, instead of *one bad* school, and the revolution will not have been in vain. There is however, but little prospect of this result, for such is the condition of the Medical College of Ohio, that Dr. Eberle speaks publicly of its depressed and disorganized state, and says, that if its condition should not be much improved he will resign at the end of the next session!

Extended as this address is likely to prove, I cannot refrain from a reference to the origin and history of the Cincinnati College, of which most of the *present* inhabitants of Cincinnati know nothing.

It is impossible, that the surviving founders of this institution, should not rejoice to hear its deserted apartments again vocal with the accents of instruction. The outer walls, with much of the interior work of the vast edifice, were erected by a very general contribution of the citizens of Cincinnati, 20 years ago, when it was designed for popular education. Three or four years afterwards the late Gen. William Lytle, who came into the West, when Ohio was not, and had aided in pursuit of the Indian over the very ground where the edifice now stands, proposed to some of our citizens, in that spirit of munificence which was peculiarly his own, that they should finish the building, endow it and obtain a college charter. Leading the way with a subscription of eleven thousand five hundred dollars, he was followed, by as many respectable citizens as made forty in the aggregate, and their contributions amounted to more than as many thousand dollars. A charter was obtained which gave ample power to appoint professors, organize a Faculty and confer "All the degrees which are usually conferred in any College or university in the United States."

Regular College classes were organized, and many of the prominent young men of Cincinnati, were taught and graduated in the institution. But the full organization of Miami University, ten years ago, with a rich landed endowment by the general government, drew off the youth of this region, and at length the Cincinnati College was suspended. Of the 40 citizens who founded the institution, sixteen are now numbered with the dead, and the families of many of them have fallen into poverty, without even the consolation of seeing, for several years past the slightest public good resulting from the investment of that, which having been withheld would have been most precious to them in these latter days. To the children of those public spirited gentlemen, and to all other contributors from the beginning of the project in 1814, who are now alive, or are represented in their sons and daughters, it cannot fail to be interesting, that what they gave of their hard and honest earnings, will at last be made available to the interests of education.

But there are persons in the community, who would deny them the gratification of seeing the public benefited by their expenditures — by the days and nights of toil they wasted on that object? Shall it be said to them, you must not exercise the powers which the Legislature gave you as a reward for your liberality, because such exercise may lessen the number of pupils in a sinking institution, that dreads nothing so much as honest competition? Has it come to this, that the remnant of the respectable and munificient population of Cincinnati, who, when it was but a village built the first College edifice ever erected in the state, cannot be permitted to make it available to the good of the community, lest it should diminish the income of four incumbents in the Medical College of Ohio, three of whom were not then in the West, while a fourth was living in an obscure corner of Europe, and is not yet it is said naturalized in the United States?

Is this the way that liberty works? Is this the result of that freedom, which creates, and in turn must be sustained by unrestrained emulation? If so, farewell to the noblest schemes which philanthrophy can invent! The genius of civilization has repealed the laws by which he raised up man from savage helplessness, to intellec-

tual and moral strength! He says to the strong, you shall not help yourselves—to the weak, ye are my favorite children! I will defend you from rivalship, and smite your competitors with the rod of my power! I have hitherto permitted the swift to run, and my affections were for those whose march was onward; but, hereafter, I will confer honors upon the unaspiring; I will shower rewards upon the indolent, and my pride shall be in those who loiter by the way!

In connection with the arrangement for a medical department I may mention, for information at home, that the present and the Board of Trustees of last year, have assigned apartments in the edifice to the Cincinnati Medical society, the Cincinnati Literary Society, the Western Academy of Natural Sciences, and the Western College of professional teachers; thus the whole building will henceforth be brought into requisition, and being, as it will put into perfect repair, promises soon to become one of the most beautiful and magnificent edifices of the city—a monument of public spirit, a superstructure consecrated to the public good.

This communication, addressed to the profession in the West generally as well as at home, is more especially designed for the eye of those pupils and medical friends, who have so often, personally and by letter, expressed themselves, in language which I shall not repeat, on the subject of my past relations with the Medical College of Ohio. In the dark days of adversity, which shrouded those relations, their letters came like the occasional sun beams which penetrate the gloom, and fall pleasantly on the eye of him who gropes beneath, although they may not illuminate the path by which he must travel out. The impression they made is imperishable, and will constitute for years to come, a most powerful stimulus to exertion in the halls of medical education, where, with many of those to whom this little effusion is addressed, not a few of the happiest hours of my life have been spent.

In this and a preceding article, I have said much of myself, but let it be remembered, that others have said of me still more. I have often been compelled to grapple, single-handed, with combinations, formidable by their numbers, their influence, and their individual respectability; but, in every instance, up to the commencement of the narrative of which this is a part, I have written in my own defence against published attacks. If in any stage of this protracted controversy, injustice has been done to a single individual, I stand ready to make public reparation; if I have, knowingly, falsified any public document, or perverted any important fact, let me be convicted. Finally, I expect hereafter to write more *on* the profession, and less *of* it; and, instead of uttering my own *complaints*, to speak *on* the *complaints* of others; not, it is true, in the wisdom of an oracle, but with the heart of a man devoted to the glory of his profession.

DANIEL DRAKE, M. D.

Cincinnati, June 30th, 1835.

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